FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

JUNE, 1948

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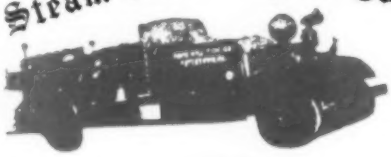
Firemanship Training Begins a New Era with the Opening of the New Haven Fire Department's Modern Training Ground (See Story Elsewhere in This Issue)

SEVEN AT ONCE

INSTITUTED JANUARY 6, 1871 INCORPORATED MAY 24, 1871

Goodwill Steam Fire Engine Co., No. 1



POTTSTOWN, PENNA.

PHONE 92

April 22,1948

Mr. James E. Kidd
J.H. Emerson Company
39 Hilaire Road
St. Davids,Penna

Dear Mr. Kidd:

Since we are one of the first users of the Emerson Resuscitator employing the dual or so-called military mechanism we think that you will be interested to know that we have been using this unit on many occasions and in the last few years feel that it has definitely saved at least twenty five lives.

One of the outstanding instances was a call for disaster in Stowe,Penna. Seven persons , the Almond family, were knocked out by coal gas. In treating them we used both the Standard Portable Emerson and the dual unit you call your military mechanism. All victims were successfully revived after about forty minutes of treatment. We feel that the resuscitator saved their lives in this case and we doubt if they would have responded as well under artificial respiration.

We have had no mechanical difficulties with the Emerson and our men find it extremely simple and easy to operate.

We thought that you would be glad to have the above information and lock forward to seeing you when you next come to Pottstown.

Yours truly,

Ass't Chief: Robert Roth

J. B. Poley
Asst. Chief R. Roth
W. Tosto
Chief R. E. Lindayer

EMERSON RESUSCITATORS

— GOOD WILL TO ALL —

J. H. EMERSON CO.

To the horizon and beyond Federal power reaches out—the power of sound, the power of sight, audibly clears the way—visually warns of your emergency. The powerful coaster siren alerts traffic and the sweep of the Propello-Ray Light effectively identifies your path. Federal power packed in the gleaming chromium shell is precision-built for reliability—powerfully constructed for durability.

Write for Bulletin 86

For power to dominate all traffic, specify Federal Sirens

FEDERAL ENTERPRISES, INC.

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FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING, THE FIRE ENGINEER, FIRE PROTECTION *and* FIRE SERVICE

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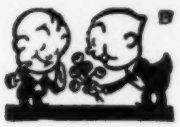
FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor



Orchids for All!

IN its long and vigorous career, FIRE ENGINEERING has pioneered and promoted nearly every worthwhile improvement in fire protection plans, policies and products, to be adopted by the nation's fire service.

● Long before the advent of automotive fire apparatus, for example, this journal was preaching more and better firemanship training for fire fighters. We believe it is a credit to its vision that FIRE ENGINEERING and the textbooks and manuals prepared by its editors have become the "standards of practice" for instructors, trainees and students in the fire service.

● Now, in this issue, FIRE ENGINEERING records another accomplishment in fire service training, the inauguration of the New Haven Fire Department's modern Training Ground where the principles of "training by doing"—i. e., learning to control fires by actually fighting them — are taught.

● To Chief Paul Heinz and his able staff for blazing this trail to more advanced firemen's training, and to fire equipment and apparatus manufacturers whose cooperation not only in New Haven but all along the training front is furthering the fire service, our sincere congratulations.

● And may we add a modest footnote? Perhaps it is no mere coincidence that the fire control and extinguishing equipment installed at the New Haven Training Grounds first received its introduction to the fire service through the columns of FIRE ENGINEERING!

The Publishers

FIRE ENGINEERING

The Journal of the Fire Profession since 1877; published on the fifteenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York 18, N. Y., also publishers of *Water Works Engineering, Sewage Works Engineering*, etc. ¶Subscription price: U. S., Latin America and Canada, $3.00 a year; Foreign, $4.00; Single copies, 35c. ¶Member of Audit Bureau of Circulations and Associated Business Papers, Inc. ¶Entered as second-class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 3, 1879. ¶Contents of this issue copyrighted, 1948, by Case-Shepperd-Mann Publishing Corp. President and Advertising Director, KARL M. MANN; Vice-President and General Manager, I. HERBERT CASE; Secretary and Editorial Director, FRED SHEPPERD; Assistant Advertising Director, WALTER H. FREDRICKS; Eastern Representative, ALFRED J. HOUGHTON; Advertising Manager, WILLIAM J. GIBSON; Circulation Manager, W. H. TOPHAM. CHICAGO OFFICE: W. S. CLEVENGER and L. M. ROCHE, 8 So. Dearborn St., Chicago 3, Ill.; SAN FRANCISCO: CHARLES H. WOOLLEY, 605 Market Street, San Francisco 5, Calif.; LOS ANGELES: AUGUST HAUBIN, 6000 Miramonte Blvd., Los Angeles 1, Calif. ¶Printed in U. S. A.

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and WHAT IT MEANS TO YOU

FOR 38 years, the word *Quality* has been associated with the name of Mack in the manufacture of fire apparatus. Today, it is universally used by fire officials in telling us why they make Macks their choice.

Mack Quality is the result of uncompromising adherence to the highest engineering, manufacturing and testing standards in the industry. To maintain these standards, Mack exerts an unequaled degree of control over the design and fabrication of every part, and over each step in construction, from foundry to finished product. Fire apparatus made by Mack is Quality . . . to the core!

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Mack Quality is apparent in every fine detail of this Type 19, 1,000-gallon pumper recently put in service by Mount Clemens, Michigan. From canopy cab to auxiliary fog equipment, it is an outstanding example of complete modern efficiency.

Mack
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Over 700 nationwide branches and dealers for parts and service. In Canada, Mack Trucks of Canada, Ltd.

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In a recent New York City fire an engine company made their first net rescue. This feat will be repeated many times over in the future because N.Y.C. pumpers carry ATLAS nets. More and more fire companies are putting nets on pumpers—the first to reach the fire—it's modern practice. Call for nets on all new pumpers as well as ladder and rescue trucks.

ATLAS *The World's best life net*

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New hose by B.F.Goodrich makes firemen's load 18% lighter

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Tube's lighter and stronger—New rubber compound allows the use of thinner weight-saving tube, with greater water capacity. Improved aging characteristics prevent cracking. Smooth inner surface of tube reduces friction loss at high velocities, delivers maximum output at the nozzle.

Jacket's lighter and stronger—To jacket this better tube B.F.Goodrich uses a larger number of smaller gauge cords—50% more warp strands, 25% more filler strands. It builds them into a cord by a new method that increases tensile strength; it weaves the cord on looms that maintain uniform strand tension. Then the woven jacket is prestretched. The result is a hose that's lighter and easier to handle, that behaves under pressure. Treated by the "Hydroseal" method to protect from water-logging and freezing.

All types of couplings—This new B.F.Goodrich fire hose is available with cast brass, drop forged brass, or the lightweight aluminum alloy coupling that weighs ⅔ less than brass or bronze couplings, but has greater tensile strength. Thanks to Koroseal swivel gaskets, these couplings tighten by hand in half the time of ordinary couplings. Accelerated corrosion tests indicate the best corrosion resistance of any lightweight coupling on the market. It's the *only* lightweight coupling approved by Underwriters' Laboratories.

Before ordering fire hose get full details on this new B.F.Goodrich municipal fire hose at your local distributor or write: *The B.F.Goodrich Company, Industrial Products Division, Akron, Ohio.*

Koroseal — Trade Mark, Reg. U. S. Pat. Off.

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Booster Pumps

for greater capacity and longer life

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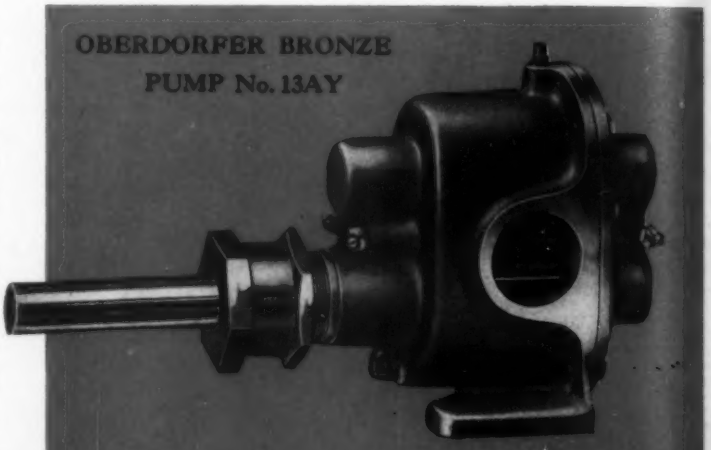
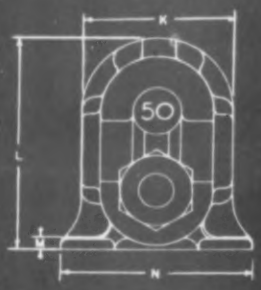
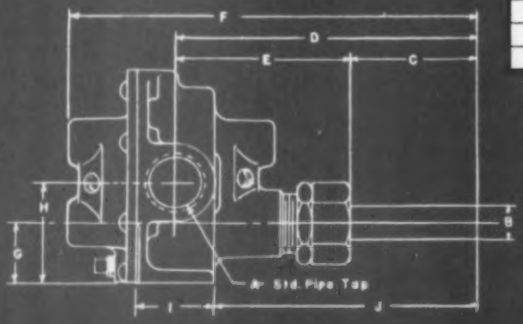


SPECIFICATIONS – Oberdorfer Bronze Fire Pump No. 11 and No. 13





DIMENSIONS

Pump No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N
11	1¼	1	4⅜₆	8⅛₆	4⅜	11⅞	2⅛	3¼	2¼	7⅛₆	4⅜₆	6½	½	5
13	1½	1	3¾	9¾	6	12⅞	2⅛	3¼	3⅛	7⅛₆	4⅜₆	6½	½	5

PERFORMANCE DATA

Pump No.	Pump Shaft R.P.M.	Pounds Pressure	Hose Length and Size	Dry Suction Lift in Feet	Vol. in Gal. per min.
11	1600	120	500′—1½″	15′	50
11	2000	120	500′—1½″	15′	65
13	1600	120	500′—1½″	15′	75
13	2000	120	500′—1½″	15′	100

LIST PRICES

Pump No.	List Price
11	$55.00
13	69.00

For complete specifications of these and other Oberdorfer Fire Pumps, and name of distributor, write

Fire Pump Division **OBERDORFER FOUNDRIES, INC.** Syracuse 1, N. Y.

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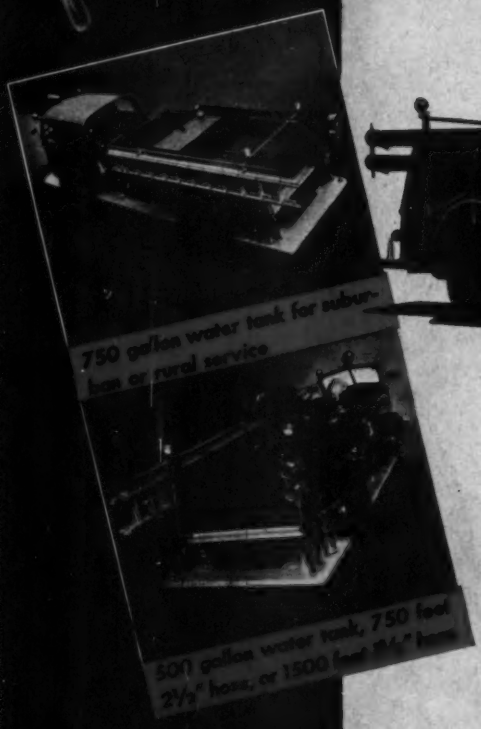
WITH AMERICAN-LAFRANCE



From water tank, draft, or hydrant, American LaFrance pumpers really *deliver.* Water tanks of corrosion resisting alloy iron are available in capacities that meet the needs of *your* community—ample space for your hose and equipment, too!

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ALFCO

AMERICAN-LAFRANCE-FOAMITE CORPORATION
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LAFRANCE FIRE ENGINE AND FOAMITE LIMITED
TORONTO 9, ONTARIO, CANADA

FARMERS MUTUAL INSURANCE CO. of Washington, Iowa, selected Bean. John Bean High-Pressure Fog Fire Fighters carry their own water supply—provide two guns of 30 gallons each—850 lbs. pump pressure. Delivered complete with all accessories.

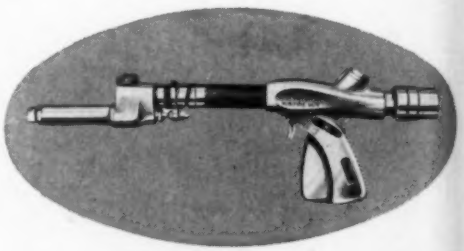
Why Farmers Mutual chose a John BEAN HIGH-PRESSURE FOG FIRE FIGHTER

THE problems faced by rural fire departments are far different than those of larger communities. Distances, time, water supply and water damage—all are special factors.

Under such conditions, fire-fighting equipment must be versatile.

John Bean High-Pressure Fog Fire Fighters have proved themselves ideal for rural use. Carrying their own water supply, these highly mobile units get there fast, put fires out fast. High-pressure fog saves water, minimizes water damage.

With John Bean Fog Fire Fighters, fire departments serving rural areas can offer maximum protection with minimum fire loss. Write for additional details.



THE PATENTED BEAN FOG GUN. Operated at high water pressure, it gives every type of fog pattern for fire fighting. One man can operate it easily.

BEAN *Original* HIGH-PRESSURE FOG FIRE FIGHTER

CAN BE MOUNTED ON MOST STANDARD TRUCK CHASSIS

FOOD MACHINERY CORPORATION

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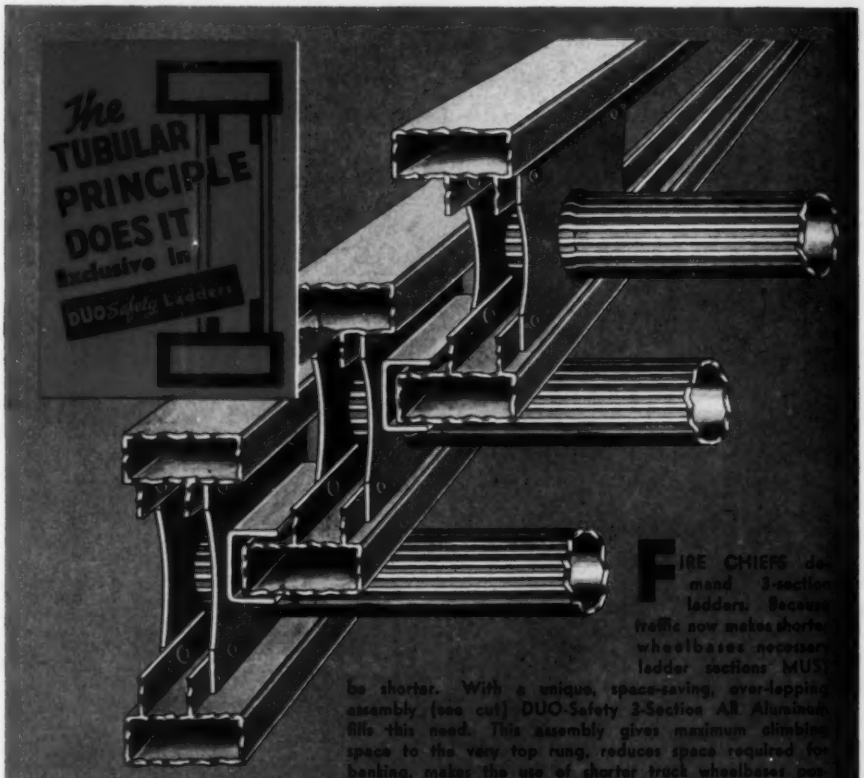
BUILDERS OF BEAN HIGH-PRESSURE PUMPS FOR OVER 60 YEARS

RIGHT! IT *is* STRONGER!

THREE-SECTION
SERIES 525-A

NEW DUO-SAFETY *All Aluminum* HAS EVERYTHING THE FIRE CHIEF DEMANDS OF LADDER EQUIPMENT



FIRE CHIEFS demand 3-section ladders. Because traffic now makes shorter wheelbases necessary, ladder sections MUST be shorter. With a unique, space-saving, over-lapping assembly (see cut) DUO-Safety 3-Section All Aluminum fills this need. This assembly gives maximum climbing space to the very top rung, reduces space required for banking, makes the use of shorter truck wheelbases possible. And it does these things without the sacrifice of strength or light weight! DUO-Safety's exclusive Tubular Principle does it! This rectangular extruded Duralumin rail, together with other structural refinements, gives the fire chief everything he's looking for, and makes DUO-Safety All Aluminum the ladder hit of the year!

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Also Makers of All-Wood Ladders and Compo-Wood-Aluminum Ladders

NOTE: Aluminum ladders Series 200A and 700A available now in limited sizes. Write for circular and details.

SERIES 700A CHANNEL CONSTRUCTION

This new Duo-Safety channel design is an outstanding development in light-weight pumper ladder equipment. All-aluminum (Duralumin) . . . all around husky construction gives you faultless quality and positive safety! Designed to replace the bulky old type solid side wood pumper ladders.

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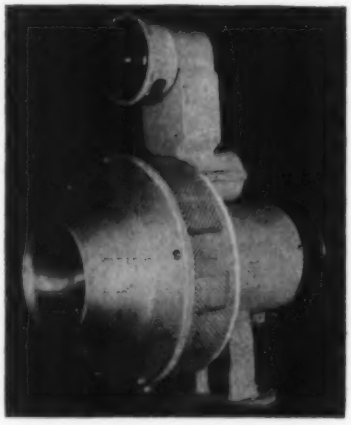
The 8" rotor or runner rolls on two double greased sealed ball bearings. The clutch is absolutely trouble proof, driven by heavy duty motor, operating at 6000 R.P.M. and equipped with adjustable tapered roller bearings. This provides for almost indefinite life as there is practically no labor for the motor to perform. It is revolutionary and truly in a class by itself. Best of materials used throughout.



The first switch contact of 3 to 4 seconds brings siren to peak high tone and then rolls for 5½ minutes or about twice as long as the average present day long roll siren. After being broken in, it may roll as long as 7 minutes. After the first contact, subsequent contacts of about ½ second, provide a totally new signal performance and the lowest minimum drain on the battery. There is nothing comparable with its performance. Built for the hardest type of service.

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The illustration above shows the only sensible red light siren combination ever built. Why? The answer is, a siren is a noise pump and the suction or air inlet is in front of siren. Any obstruction placed there, curtails and reduces the efficiency of the siren. The discharge comes out through the port openings around the stator or shell of the siren. Nearly all pumps have either a larger suction or the same size as the discharge. Accordingly, any obstruction at the suction will starve the pump. All Fire Chiefs know this argument is true and it is easily proven. Start your open front siren and hold a piece of cloth material in front and the siren will instantly want to draw it inside.

THEY SMASH THRU TRAFFIC LIKE ARTILLERY FIRE

All present day siren red light combinations have the red light in front of the siren with a few slots back of it to admit air. The popular mounting appears to be on the fender. This causes the beam of the red light to be in so close parallel to the headlight beam, that the efficiency of the red light is totally or much impaired. The Hedberg siren has the red light mounted 8½" above the center of the siren. It is just high enough to overcome the interference of the headlight beam or about 16" above the headlight beam. It does not interfere with the vision of the driver.

We are willing to submit for test and trial, in competition with anything built, regardless of price and without obligation to purchase. This fair offer should appeal to Department Chiefs for most serious consideration.

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The sooner water plays on a blaze, the less likelihood there is of serious life and property losses.

Flexibility and light weight make BWH Fire Hose trigger-quick to "get going". But it's a real husky in carrying high pressure loads, resisting hard knocks and giving long service.

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The appointment of The General Detroit Corporation as sales agent for BWH Fire Hose in most communities means even better service for municipalities that want the best in fire-fighting equipment. Look for the "General" listing in the classified section of your phone book — call a "General" representative next time your city needs fire hose.

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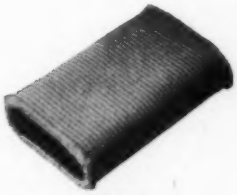
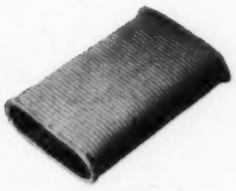
"BOSTON FIRE JACKET" HOSE
Double Jacket
Heavier, stronger fibers, perfect adhesion, smooth, friction-resistant waterway. Rates tops in every test!



BWH
"PARAMOUNT" HOSE
Double Jacket
Designed for easy handling and long service on tough jobs. Ages well, withstands high pressures.



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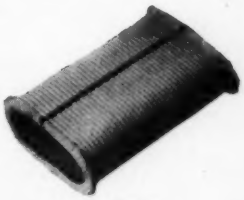
"MILO" HOSE
Single Jacket
For long, trouble-free performance in communities where a light service hose is adequate.



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"UNDERWRITERS" HOSE
Single or Double Jacket
Made in strict accordance with the National Board of Fire Underwriters' specifications. Labeled or unlabeled.

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SIGNAL LIGHTS FOR LESS THAN THE ORIGINAL COST OF THE

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YOU CAN'T BUY A LIGHT

THAT WILL COST YOU LESS, YEAR AFTER YEAR, IN TROUBLE FREE SERVICE

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MORE THAN 11,000 MARS SIGNAL LIGHTS

Have Been Installed on the Fire Apparatus of Over 300 Cities and Towns

So Far As We Know
All of These Lights Are Still Giving Satisfactory Service!

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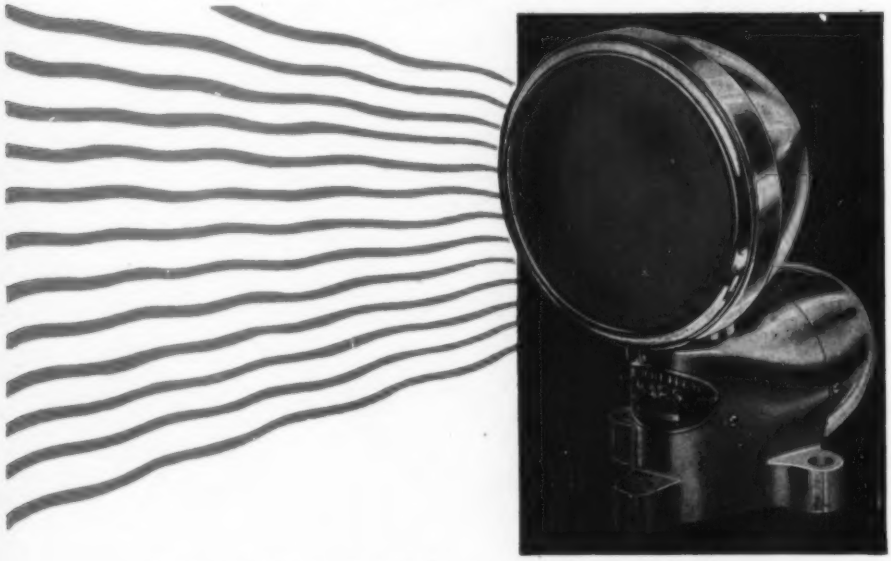

Mars Light Is Fully Guaranteed for Five Years
Mars Has Never Failed to Back Up This Guarantee and Never Will

WHEREVER SAFETY OF FIREMEN, APPARATUS AND THE PUBLIC IS THE FOREMOST CONSIDERATION YOU'LL FIND FIRE DEPARTMENTS USING AMERICA'S FOREMOST WARNING SIGNAL LIGHT

IMMEDIATE DELIVERY

MARS SIGNAL LIGHT CO. 5737 W. DIVISION ST. CHICAGO, ILL.

It's MARS from Coast to Coast

Insist on MARS when you order New Equipment
—Install it on Present Equipment.

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Heavy Duty Aluminum Extension Ladder

Available in lengths from 30 ft. to 65 ft., the 65-ft. length weighing only 232 lbs. This popular ladder is also available in 2-section and 4-section models.

• LIGHTWEIGHT—*Easily Handled*

Aluminum fire ladders can be extended and moved quickly and easily by very few men. Fast action when it's most needed.

• STRONG—*Dependable*

Aluminum fire ladders are constructed of high-tensile strength aluminum alloy with corrugated rungs securely fastened with aluminum expansion bushings. Rungs never become loose or break off.

• LONG LASTING—*Economical*

Aluminum fire ladders maintain their strength for years and years. Will not rust, spark, rot, burn or deteriorate in any way. Thus they are always safe, and ladder replacement is kept to a minimum.

The *Aluminum Ladder Company* is the "Original Manufacturer of Aluminum Ladders." In 1936 they made the *very first* all-aluminum fire ladder ever constructed. Since then, constant research, developments and improvements have kept original aluminum ladders the safest, most modern ladders available. Write for descriptive literature and prices.

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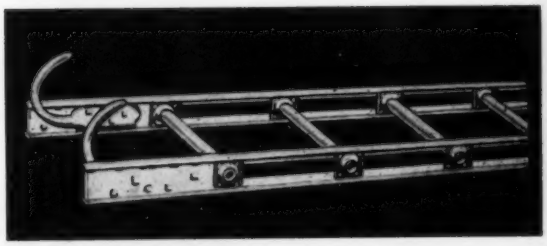

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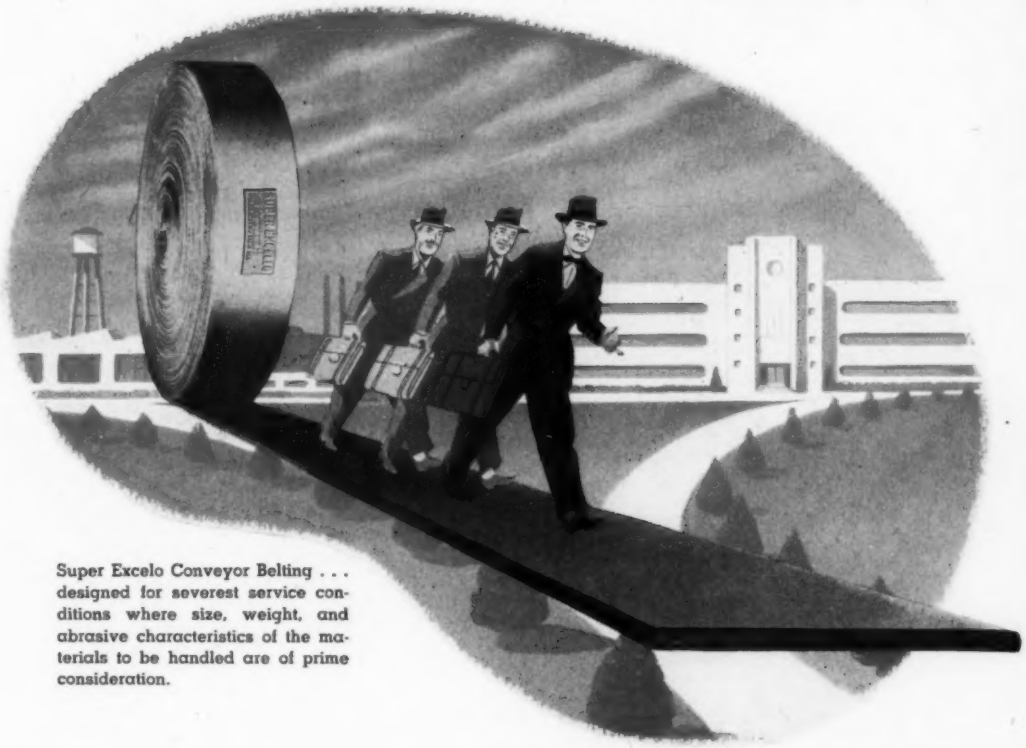

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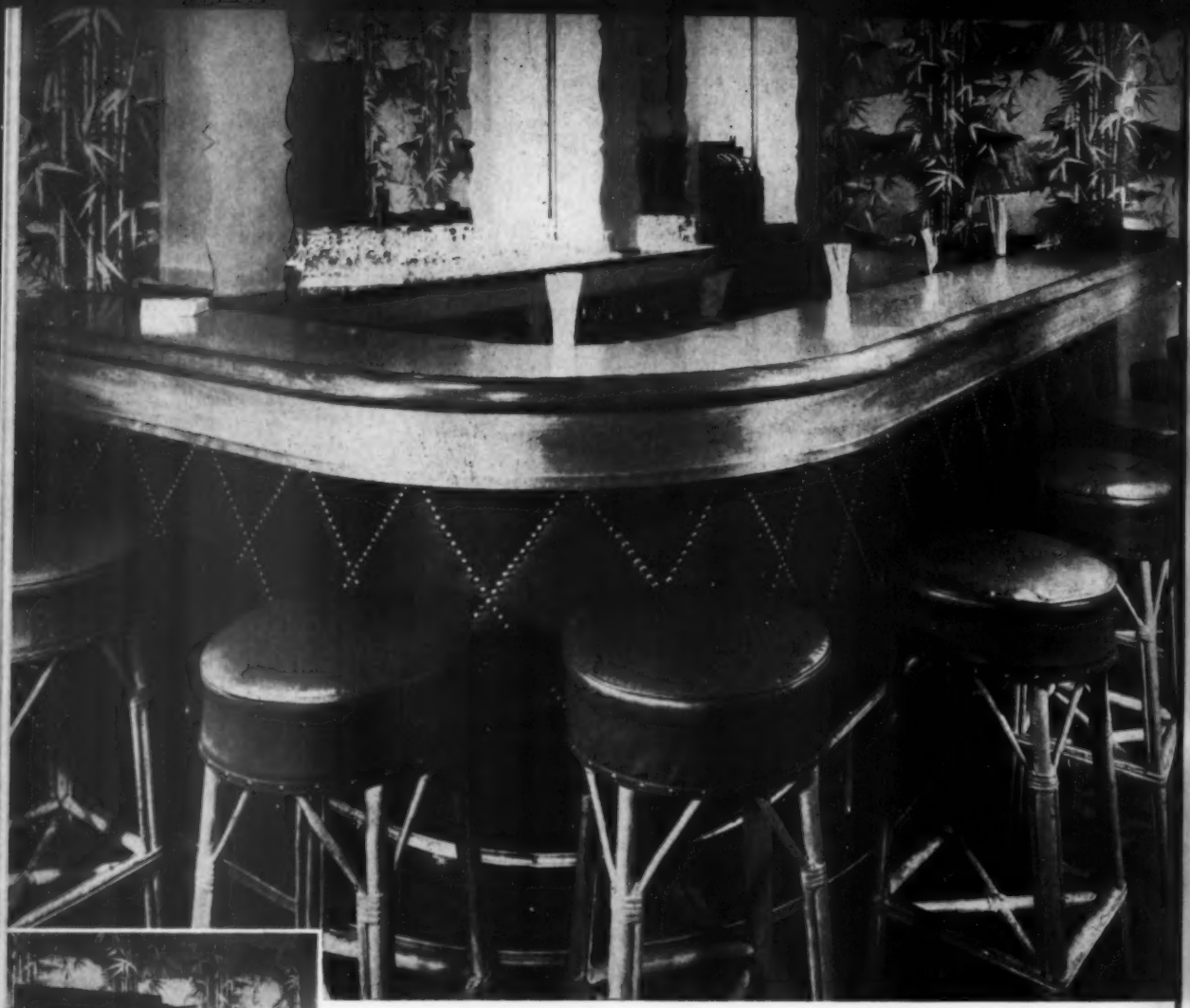

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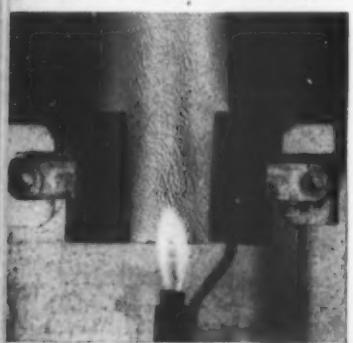

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TOLEX is certified to be FIRE RESISTANT by large cities like Boston and New York.

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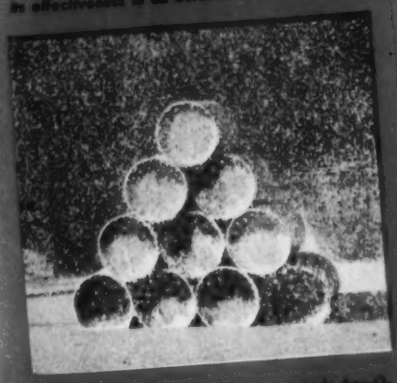
National's Overhead Foam Spray Deflector shows its effectiveness in an outdoor demonstration.



Quickly, the Overhead Deflector spreads Aer-O-Foam over the fire, completely smothering the blaze.

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ACTS QUICK . . . PREVENTS FLASHBACKS . . . STOPS LOSS

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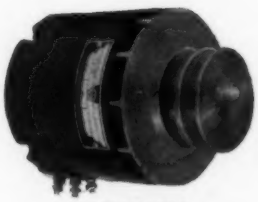
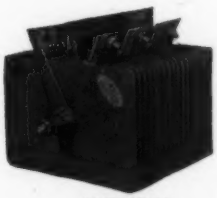
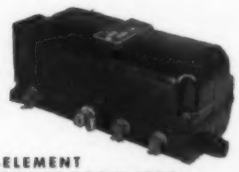
You can't get this additional power by pushing a button or making an adjustment on a conventional D-C generator. But now you can get it from a *new kind of generating system*—a higher-output A-C system developed by Leece-Neville. Interested to the point of wanting more facts? Just write *The Leece-Neville Company, Cleveland 14, Ohio.*



ALTERNATOR
WEIGHT . . . . . 31 Pounds
RATING . 14 Volts–100 Amperes



RECTIFIER
WEIGHT . . . . . 7 Pounds
RATING . 14 Volts–100 Amperes



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WEIGHT . . . . . 4¼ Pounds
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Similar 3-unit system for 6-volt service weighs 41 pounds, rating 60 amperes—420 watts. For 12-volt service, another system, utilizing same Alternator as shown above, is rated at 60 amperes. COMING—12 volt system rated at 150 amperes.

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Use your small jobs for fighting grass, brush and dump fires—

BUT, WHEN YOU BUY NEW APPARATUS—
BE SURE IT'S

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Fire apparatus is built and bought to handle fires of various types and sizes. Make sure, in buying new apparatus, that you get apparatus BIG ENOUGH to handle ANY fire. When the job calls for a big pumper, several small jobs will not fill the bill. When you buy big apparatus you are making a big investment. To get your money's worth, we suggest you employ our three generations of apparatus building experience. You'll get apparatus BIG ENOUGH and DEPENDABLE.

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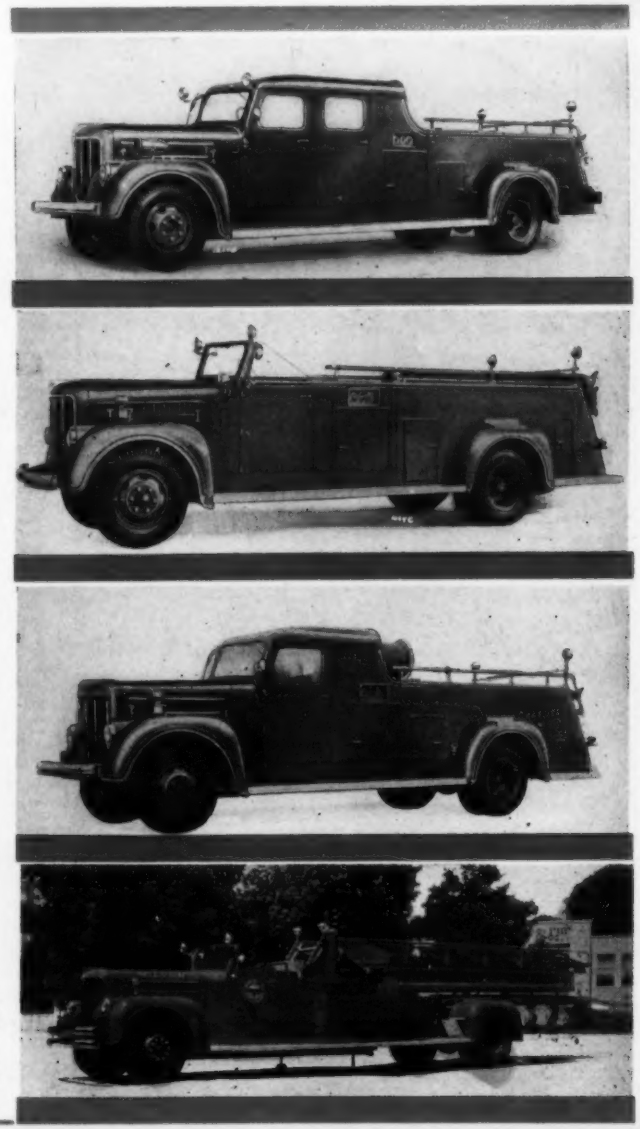

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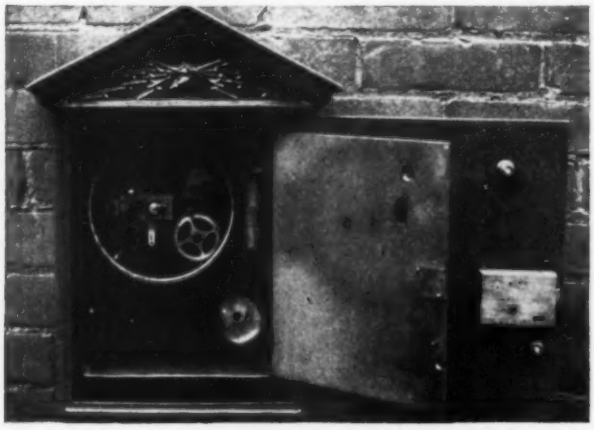


Replaced after 52 years service — Without repair during that period.

The service record of Box 14 is not an isolated instance; it is but one of many. Gamewell Fire Alarm Systems have demonstrated their durability and efficiency for nearly a century — which explains the universal preference for them. Expenditures for adequate fire alarm box distribution should be regarded not as expenses but as sound investments in public safety.

Obsolescence due to the production of later models of greater efficiency — not deterioration — is the principal cause of retirement from service of Gamewell boxes.

THE CUMBERLAND NEWS, CUMBERLAND, MD., TUESDAY, MARCH 2, 1948

Fire Alarm Box 14 Gets Honorable Discharge After 51 Years' Service

Original System Was Installed In 1896

Fire Alarm Box No. 14, which has stood on guard at the corner of Washington and Allegany Streets for more than half a century, received an honorable discharge yesterday.

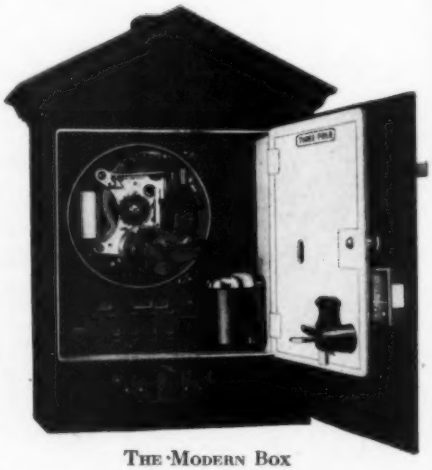
Fire Chief Reid C. Hoenicka said that No. 14 was the last of the 12 original fire alarm boxes which were placed in operation here on October 27, 1896.

Chief Hoenicka, assisted by Eugar F. Lible, maintenance electrician, and Walter Jenkins, general maintenance man, yesterday replaced the faithful alarm box with a modern mechanism similar to those used in the other 74 alarm boxes of this city.

Firemen said that No. 14 has never been repaired during its long service.

In the 40 Years Ago column of the September 22, 1936, paper appeared the following:

"The Gamewell Electric Fire Alarm and Telegraph Company, New York, accepted the contract for the erection of its system in Cumberland, as modified by the City Council and was to commence work at once."



THE MODERN BOX
THREE-FOLD TYPE

THE GAMEWELL COMPANY

NEWTON UPPER FALLS 64, MASSACHUSETTS

In Canada: Northern Electric Company, Ltd., Montreal

FIRE ENGINEERING

JUNE, 1948 VOL. 101, NO. 6

With the Editor

Mistaking Mutual Aid

One of the most encouraging developments in the fire service over the past decade has been the recognition of the importance of reciprocal arrangements, or mutual aid between the fire forces of different communities. From simple verbal understandings and informal agreements, mutual aid has progressed to the point where entire counties function on a systematic, predetermined plan, almost as a single battalion or division of a large municipal department.

This is all as it should be and it is to be hoped that the procedure continues to expand. But there is one element of this progressive mutual aid often misunderstood and which can easily lead to trouble. That is the tendency, encountered on an increasing scale, particularly among civic officials who have connection with, or authority over fire departments, to rely upon a mutual aid plan, i.e., the apparatus and personnel of a neighboring department to take the place of fire fighting facilities that they themselves should possess.

In short, mutual aid is no excuse for any political subdivison not having the most up-to-date and adequately equipped fire protection force that it should have, measured by present day standards of fire control efficiency. It will be well for those civic authorities who have this misconception of mutual aid to bear in mind that every fire department owes primary allegiance to its own bailiwick. Even with the best of intentions to go to the aid of a neighbor in distress, it may be necessary to withhold that help because protection of home life and property come first.

Under these circumstances—and the conditions are not imaginary but are being encountered on an increasing scale—the head of a fire force who has placed his reliance in time of emergency upon a neighbor community instead of building up adequate fire protection in his own political subdivision, is leaning upon a very weak prop.

Just how hazardous this misapplied reliance upon mutual aid may be was demonstrated in an eastern county having a very effective mutual aid setup. One community in the county was badly in need of an aerial ladder—had been, in fact, for over twenty years. Each year the request of the department to fill the need was pigeonholed for one reason or another.

This year, the trustees who run the village again cancelled off the aerial and came up with this excuse: They said, in effect, "we are a part of an excellent country-wide mutual aid organization. . . . there is a fine, modern ladder right in the next town only a few miles away . . . the heads of that community, and its fire chief, assure us they'll willingly dispatch their aerial to our help at any time of the day or night. . . all we've got to do is notify them, and they'll be right over!"

One evening the community that needs the new ladder had a fire in the upper part of an apartment house. But, although the mutual aid system functioned, the neighboring town was unable to respond with its aerial because at the time its ladder company was out, having a drill. Fortunately local firemen held the fire; no lives were lost and property damage was small. The episode, however, convinced firemen of both communities of the wisdom of not relying too greatly on mutual aid.

Mutual aid is splendid, but it is no substitute for adequate local fire fighting facilities. There's an old saying: "Self-preservation is nature's first great law," which fits the case. Adequate local fire protection should be the first commandment of the fire service!

Fred Sheppard

Fires in Flammable Liquids Swell Life and Property Losses

Current Disasters Involving Processing and Storage of Petroleum Products Emphasize Human Fallibility and Need of Broader Safety Measures

By ROI B. WOOLLEY

Editor's Note: Spring, 1948, ushered in a series of disastrous fires, most of them accompanied by explosions, in the field of flammable liquids, particularly the processing, storage and handling of petroleum products.

Two of these fires are of special interest to students of fire control. Both were costly in loss of life and property. Both threatened widespread destruction, located, as they were in an area of concentrated hazards. And both were controlled only after most strenuous efforts of fire fighters, utilizing all the tricks in the firemanship pharmacopœia.

These two fires, that in the Consolidated Gas Company plant in Everett, Mass., on May 15, and that in the works of the Koppers Coke Company, in Kearney, N. J., on May 17, are described in the following.

The author gratefully acknowledges the assistance of Fire Chief William Wandras of the Kearney Fire Department and Asst. Fire Chief Scott of the Everett Fire Department, both of whom were in charge of fire fighting operations on these respective fires, also the cooperation of correspondent Philip M. Cronin for his account and illustrations. Others who kindly contributed source data for this account will no doubt recognize their handiwork.

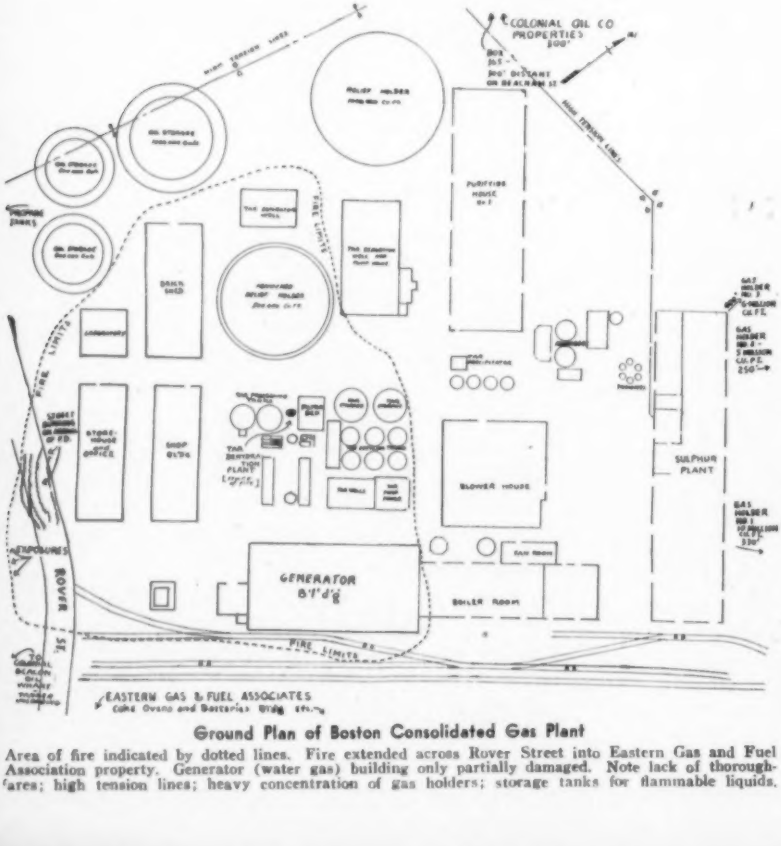
FIRE, preceded by an explosion, tore through part of the twenty-one acre plant of the Boston Consolidated Gas Co., Everett, Mass., May 15, 1948, killing one man and causing damage variously estimated at from $2 million to $4 million before it was controlled by fire fighters from half a dozen municipalities.

The disaster, worst in Everett since 1928, when nineteen men were killed in the same area, brought to light weaknesses in the fire protection systems in occupancies where hazards are great and resulted in the Everett City government cracking down on several of the largest industrial concerns which come within the protective district of its fire department.

Dehydrator Reported Source of Fire's Start

Investigation by fire, police and plant officials following the holocaust located the source of the trouble in dehydrator No. 7 in the Dehydration plant, located in almost the exact center of the closely grouped buildings and highly flammable oil and other storage tanks.

It is believed that a ruptured steam line inside No. 7 caused the contents of this unit to be forced through a 10" overflow line from the 49' level into the wells and over adjacent property. About 70,000 gals. of tar, light oil and water was scattered over a large area and once the vapors ignited—from a cause not disclosed—a terrific blast followed. This is said to have resulted in a second explosion in one of the nearby sludge tar tanks, which spread the roaring fire rapidly through the three nearby structures and across Rover Street toward the exposed Eastern Gas & Fuel Associates benzol and by-products plants and propane storage tanks.



Ground Plan of Boston Consolidated Gas Plant

Area of fire indicated by dotted lines. Fire extended across Rover Street into Eastern Gas and Fuel Association property. Generator (water gas) building only partially damaged. Note lack of thoroughfares; high tension lines; heavy concentration of gas holders; storage tanks for flammable liquids.

Serious Exposures Threaten a Vast Conflagration

The Boston Consolidated Gas Co. plant is located in Everett, Mass., a city of Greater Boston, contiguous to Charlestown and separated from it by the estuary of the Mystic River. The plant, which covers an area of approximately 1,000,000 square feet, is situated in about the center of the Everett industrial area and approximately 500 yards from a residential section of South Everett.

The plant is reached through two points of access, one from Rover Street, which borders it on the south, and one from Beacham Street on the west. As is shown on the accompanying diagram, the latter thoroughfare divides the Consolidated plant from the properties of the Colonial Beacon Oil Co., while Rover Street separates the plant from the hazardous installation and storage supplies of Eastern Gas & Fuel Associates. Southeast of the Consolidated properties and separated from them by railroad tracks, are the coke ovens and batteries building of the Eastern Gas & Fuel Associates. To reach the Consolidated installations via Beacham Street, the route is past the Colonial Beacon properties through the Eastern Gas & Fuel plant.

The exposures of this latter company included the benzol plant, measuring approximately 100 feet x 150 feet; the

Explosion and Fire Threaten Everett Industrial Area

One man killed; property valued at over $2,000,000 destroyed May 15, 1948, as fire roared through part of 21-acre Boston Consolidated Gas Company installation, Everett, Mass. East's largest supply of gas threatened.

by-products plant, 100 feet x 140 feet, and the group of storage tanks, the total having a reputed value of $20,000,000. The Colonial Beacon properties include a refinery, storage farm and oil loading wharf on the estuary which, at the time of the fire, was occupied by the large tanker S.S. Orville Harden. Oil was being pumped from the tanker to the Beacon Oil Refinery plant. It is said part of the Eastern Gas Associates plant was shut down at the time of the fire, while its tanks were being steamed out. Had this installation become involved, the fire could conceivably have spread through the entire district.

Located north of the Consolidated plant, and within its boundaries, are three large gas holders, with capacities of 5 million, 6 million and 10 million cu. ft. of gas, respectively—the latter said to be the largest gas storage container in the East. These were all less than 600 feet from the fire area. One relief holder having a capacity of 500,000 cu. ft., was located within the burned area and another of 1,000,000 cu. ft. capacity was situated only about 225 feet from the heart of the blaze. West of the heart of the fire, also about 250 feet distant is situated three oil storage tanks with a total capacity of 2,000,000 gals.

The Boston Consolidated Gas Co. produces water gas which is the main constituent of household illuminating gas; water gas, a mixture of hydrogen and carbon monoxide, is produced by blowing steam over white hot coke; butane, benzene, propane and other highly flammable organic solvents are manufactured there.

Destruction Will Exceed $2,000,000

The fire destroyed or badly damaged installations in an area of over 150,000 square feet. Totally destroyed was the shop building, measuring 30 feet x 80 feet; a brick shed, 40 feet x 80 feet; the brick office and storehouse, 30 feet x 80 feet, and most of the tar dehydrating plant installation, together with tar processing and tar storage and settling tanks. Six automobiles and a truck also were consumed. Partially destroyed was the laboratory, about 40 feet x 40 feet, and the huge generating plant of approximately 160 feet x 80 feet. This building rising to the height of nearly 8 stories, and valued at $2,000,000, had part of its walls blown out and one end entirely gutted. Damage was also done to gas, steam, water and other pipe installations which honeycomb the area, and to numerous small sheds. The destruction of the small brick supply building is reported to have wiped out the entire company fire equipment.

One life was lost, that of Frank Amata, who was killed when he was blown out of the pump house, where he was on duty to go into action in the event of just such a blast, to prevent the spread of fire. His body was found over two hours later about 20 feet from where the shed had stood and out of which he was lifted by the blast. Four other workers had a narrow escape when they were nearly trapped in the generating plant. They were uninjured. Loss of life would have been much greater were it not for the fact that the disaster occurred late Saturday afternoon when only sixteen men of the normal staff of 130 were on duty.

Explosion Preceded Fire

It was at precisely 5:14 P.M. when an explosion in the Consolidated plant shot a pillar of smoke and flame high in the air and sprayed blazing oil over the main office building, and machine shop and laboratory. These structures were quickly involved and the blazing liquids had spread across the roadway to the

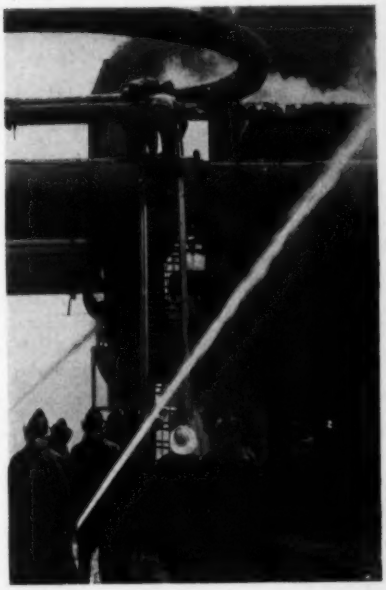


Photo by Philip Cronin

Perils Encountered at Consolidated Gas Fire, Everett

Firemen aided by plant workers struggle to shut off large gas pipelines, working in steam shower from burst water main under protection of hose line.

Photo by Philip Cronin

Firemen at Close Grips with Everett Fire

Handicapped by insufficient water supply, fire fighters of Everett, Mass., and five neighboring departments fight to control costly fire in Boston Consolidated Gas plant. Note fire burning around gas holder, right rear.

benzol plant before the first-due firemen were near the scene.

The initial detonation was heard over a wide area and the flash of the blast was observed on Tufts College Hill, six miles distant. The smoke column was visible a great distance and served to alert fire forces over a wide area, as well as to start a stampede of the curious to the scene.

The Everett Fire Department records the receipt of the first alarm at 4:15 P.M. Five Everett fire companies in charge of Assistant Chief James A. Scott responded. In a report to FIRE ENGINEERING, Chief Scott said that because Box 365, the first one of many received at fire headquarters, was located at the gate of the Colonial Beacon Oil Co. and known as that company's box, he responded via Beacham street. This brought him in the rear of the Boston Consolidated Gas Company property.

Even before he reached the scene of the fire Chief Scott realized the seriousness of the task facing him and while still en route, notified fire alarm headquarters to strike a third alarm, skipping the second. He says, further, that upon arrival, and after a very quick survey, he was running back to his car to send in a fourth alarm by radio when Boston Fire Commisisoner Russell Codman, Jr., stepped up to him and volunteered the help of six engine companies of the Boston Fire Department; this aid Chief Scott gladly accepted. It is disclosed that Commissioner Codman also found his car radiophone helpful; he received the report of the Everett fire over it and this, coupled with the towering smoke signal, impelled him to respond. This Boston assignment, and the later special calls for additional help, together with the activating of the area's mutual aid system, made unnecessary a fourth alarm.

According to Chief Scott, the first alarm Everett companies and part of the third alarm assignment responded to the fire by way of the entrance that took them through the Eastern Gas & Fuel Associates plant. The six Boston companies responded via Rover street, which is on the Charlestown-Boston-Everett boundary line.

By the time the first alarm companies had reached the gate of the plant, the flaming oil was already cascading across Rover street and threatening the tanks of the Eastern Gas & Fuel Associates plant. Flames were involving overhead pipe lines leading to the benzene producing plant and other installations, and radiated heat threatened the huge gas storage tanks at the north end of the Consolidated property.

The initial points of attack, therefore, were upon the flowing fire to the south, and the setting up of protective curtains and streams to hold the fire from the gas storage tanks. A small shed on the Eastern property was already engulfed when Chief Scott began his battle to confine the fire at that point. This operation was successful, and extension was cut off, but at the price of the spread of the fire within the main Consolidated installation itself. It is reported that foam was used in helping control the street fire.

According to Chief Scott, the Consolidated fire hydrants were not used because of the difficulty in reaching them. The 14-inch main along Rover street and the Eastern Gas & Fuel plant line off the city main provided initial source of supply, with pressure at 60 PSI. Once the Rover street hazard was removed, firemen turned their attention to extinguishing the flaming buildings on the Boston Consolidated Gas Co. property. By this time the Boston companies were on the scene. Engine 32 of that department was placed between the Consolidated company's laboratory and office building where its deck gun did effective work.

Fire in the remains of the old abandoned 1,000,000-gallon relief gas holder (see diagram) gave the fire fighters considerable trouble; so, too, did the flames in the extensive and complicated overhead pipelines carrying gas, and combustibles. Here the municipal firemen were aided by plant workers. The inaccessibility of hydrants in the premises of the Boston Consolidated Gas Co. plant necessitated some long stretches of hose lines and placed a heavy drain on the city water supply system in the neighborhood of the plant. At one time it was reported there was a serious drop in water pressures and at no time was there ample supplies of water available to all the fire forces.

When the fire threatened to spread further toward the River the large Esso tanker S.S. Orville Harden was quickly moved into the middle of the estuary. Two of Boston's fireboats were special called and stood by at the Colonial Beacon wharf ready to provide auxiliary water supplies if needed. Meantime, mutual aid assignments from neighboring Somerville, Chelsea, Revere and Malden had moved in to cover empty Everett fire stations. The wisdom of this strategy was attested when these aiding units handled a number of other alarms, two of them being false, during the period before Everett companies were returned to quarters.

Photo Courtesy Asst. Chief Scott, Everett Fire Department

Wide Destruction at Consolidated Gas Fire, Everett

Looking toward the water gas building showing firemen operating amid burned and wrecked buildings, motor vehicles and pipe lines. Gas tanks in rear were threatened.

Photo Courtesy Asst. Chief Scott, Everett Fire Department

Boston's Engine 32 in a Tight Place at Everett Blaze

Deck gun at work on one of five Boston pumpers rushed to aid Everett firemen control Consolidated Gas Company blaze. Location is narrow areaway between laboratory and office-storehouse. Note destruction.

Smoke Said to Have Caused Rain Storm!

The weather at the time of the fire was cloudy with intermittent showers. The temperature was 65° F.; wind,

northeast at about 20 MPH; barometer, 29.80 inches, steady.

According to press accounts, an unusual phenomenon occurred during the height of the fire. The smoke from the blaze was so dense, weather bureau officials said, that it caused rain in Braintree and Weymouth, nearly fifteen miles away. Rain is formed when moisture in the air collects on small particles such as smoke or dust; when the heavy black column of smoke billowed upward and mixed with the low hanging clouds, rain was precipitated.

Conclusions

According to informed officials including Chief Scott, the conflagration, like so many that have preceded it, was the indirect outcome of concentrating large storages of highly flammable liquids and combustible buildings engaged in hazardous manufacturing occupations within a confined area. Contributing factors, also, are said to have been the narrow, two-lane roadway into the plant; the inadequate water supply in the plant grounds, particularly; the extensive exposure hazards and the policy of fencing in the area.

New Safety Regulations

Following a long conference with Company and fire department officials, Mayor James F. Reynolds of Everett threatened to close down the Eastern Gas & Fuel Associates, Boston Consolidated Gas Co. and the Koppers Tar & Chemical Co. plants unless they complied with new safety recommendations. These included the following:

Eastern Gas & Fuel Associates: 1.—A new 20-inch water main to be laid from Second street into its property, connecting with the present Company water system, which is to be revamped in its entirety.

2.—A new road to be constructed from East Locust street into the Koppers Tar & Chemical Co. extending through the plant under the trestle, along the front of the coal pocket to the Rover street extension, to the rear of the laboratory building extending along the waterfront into the Mystic Iron Co., with one exit to Rover street.

Boston Consolidated Gas Co.: 1.—A new water system be installed for fire protection only.

2.—A new road be constructed from Beacham street to the main road leading to Rover street.

3.—A new road and all other roads be properly marked as to their destination.

Koppers Tar & Chemical Co.: 1.—A new water system be installed for fire protection only, at once.

It was stipulated by the City that if these recommendations are not complied with, the licenses of the beforementioned companies should be revoked.

Chronology of Alarms and Response

4:14 P.M. Box 365, Street box located at Colonial Beacon Oil gate, ¼-mile from fire. Everett Engs. 1, 2, 3 and Ladders 1, 2; Asst. Chief James A. Scott, Everett.

4:15 P.M. Box 363 NSO (not sent out)

4:15 P.M. Box 353 NSO

4:16 P.M. Box 371 NSO

4:16 P.M. Box 37 NSO

4:16 P.M. Box 354 NSO

4:16 P.M. Box 372 ADT

4:16 P.M. Box 371 ADT

4:19 P.M. Third alarm (second alarm skipped) by radio from car of Asst. Chief Scott, enroute to fire. Everett, Engs. 4, 8; Ladder 3; Somerville Eng. 2; Chelsea, Engs. 2, 4; Ladder 2; Revere, Engs. 3, 4; Malden, Engs. 1, 4; Somerville, Eng. 3.

4:19 P.M. Box 8216, Chelsea, Call to Everett

4:19 P.M. Box 92 Revere, Call to Everett

4:20 P.M. Box 8216 Boston, Call to Everett

4:20 P.M. Box 8, Malden, Call to Everett

4:21 P.M. Box 13-365, Somerville, Call to Everett

4:20 P.M. Boston response direct to fire, Engs. 32, 50, 10, 26, 5. Eng. 50 covering at Central Fire Station; Ladder 22 covering at Hancock Street Station, Everett.

4:25 P.M. Box 21 False alarm (all out 4:32 P.M.)

4:37 P.M. Box 365 Special call, Engs. 23, 31 (boat) 44 (boat) Boston. To fire (boats stood by).

4:50 P.M. Box 365, Special call, Rescue 3, Boston, to fire.

7:33 P.M. Box 327 False alarm (all out, 7:41 P.M.)

Covering apparatus: At Central Station, Everett: Boston Eng. 50, Somerville Ladder 2; Hancock Station, Malden Eng. 3, (Comb. A) Boston Ladder 22. Ferry St. Station, Revere Eng. 5.

There were also two Everett ambulances and one Metropolitan Red Cross ambulance at the scene.

Twenty-five Companies at Fire

Total companies at the fire: 21 Eng. companies (2 boats); 3 Ladder Companies and one Rescue Company. Boston Engine companies all equipped with tenders. Working strength at fire: approximately 250 men, including approximately 50 plant employees.

Everett Suffers Second Serious Fire

Almost before the investigation into the Boston Consolidated Gas Company fire was completed, the City of Everett suffered another serious fire in an installation involving petroleum products.

This fire occurred in the plant of the Triangle Oil Company on Norman at Kelvin Streets, Everett. The Triangle Company processes crank case oil and the fire involved its main building, a two-story wood, metal-covered structure, 180 feet by 30 feet in area.

The hot fire—cause undetermined at this writing, threatened the power substation of the Malden Electric Co. across Kelvin Street, and the large General Electric Company foundry and warehouse buildings, approximately 200 feet distant across Norman Street. Dwellings in the rear of the Triangle plant, located 100 feet south of the company's stills, were also exposed to radiated heat and flying embers.

As in the Consolidated fire, the mutual aid plan of the area was put to good use, out of town companies locating in empty Everett fire houses.

Response

The alarms and responses were:

10:39 A.M. Box 328

10:42 A.M. Second alarm, by radio to fire alarm headquarters

10:45 A.M. Third alarm by radio to fire alarm headquarters

In operation at the fire: Engines 1, 2, 3, 4, 8 and old No. 4 and Ladders 1 and 2 of Everett. Engines 5 and 32, Boston; Engines 1 and 4, Malden; Engine 2 and Ladder 2, Somerville. A total of 11 Engine and 3 Ladder companies.

The weather was clear; wind west, at 15 MPH. No firemen were seriously injured. Loss is estimated at $20,000.

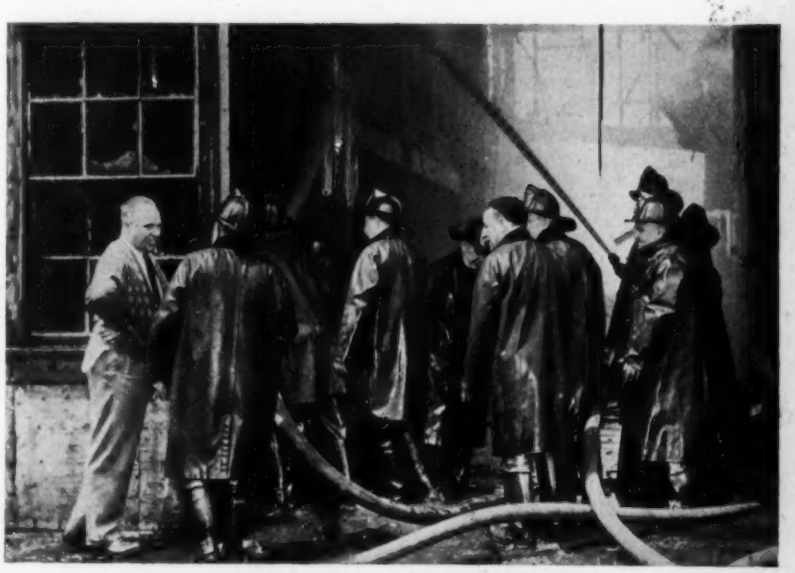


Photo Courtesy Asst. Chief Scott, Everett Fire Department

Firemen Fight Second Serious Everett Fire

Closely following the costly Consolidated Gas Co. fire of May 15, another 3-alarm blaze on May 27 wrecked part of the oil reprocessing plant of the Triangle Oil Co. Shown here are Everett and aiding fire fighters amid wreckage of the Triangle plant.

TEN KILLED IN KOPPER'S BLAST AND FIRE IN KEARNEY

AN EXPLOSION of vapors, resulting from a combination of circumstances at the Kearney, N. J., plant of the Koppers Coke Company, on May 17, 1948, resulted in the death of ten men and started a fire which threatened not only the vast Kopper's plant, but an entire industrial area.

The Kopper's plant is part of the company's tar-products division and covers five acres of ground along the Hackensack River, about 500 yards from the Newark Turnpike. A dozen buildings of varying size and type are sprawled over the terrain, including the huge blast furnaces, and a condenser building, which measures 250 feet x 400 feet. It is said that approximately 9,000,000 gallons of tar oils and other fluid petroleum products are stored in the area. The plant is reputed to be the company's largest installation in New York's Metropolitan district. About 400 employees were at work at the time of the disaster, but only those trapped in the locker rooms on the second floor of the combination laboratory and machine shop, known as the service building, were casualties.

As in many similar industrial installations, there is a heavy concentration of flammables in storage or being processed, in close proximity with combustible structures in the Kopper's property. The plant is reported well equipped with approved safety devices and plant personnel are said to be trained in coping with run-of-the-mill fires that are peculiar to this type of industrial enterprise.

What, or who was to blame for the initial blast will probably never be known because the men who were concerned, and who might have furnished the clues, all died in the furnace heat of the fire that followed the explosion. Investigation by the Kearney Fire Department, Chief William Wandras, and Kearney Police and plant officials have established certain facts which point to human fallibility as the primary source of the trouble.

Reference to the photograph below shows a battery of tanks located north and east of the two-story service building, to the right of which is situated the condenser building (only partially shown).

Most of the tanks shown in the photograph were of 30,000 gallons capacity each and contained tar oil, or "drip oil." Two of these tanks, most prominently involved in the disaster,—Nos. 42 and 43, were being steam treated at the time. These tanks are equipped with steam coils in the bottom for heat-treating the tank contents to a consistency that will facilitate their transfer. The conclusion reached by investigators is that in some way the steam treatment was misapplied for a considerable period of time prior to the explosion, resulting in overheating of the contents with consequent increase in vaporization and building up of vapor pressures.

Tanks 42 and 43, it is reported, contained drip oil, having a flash point of approximately 100 deg. F as compared with tar oil, stored in other tanks, which has a flash point somewhere between 350 and 600 deg. F.

These tanks are fitted with regulation safety vents and manholes but have fixed wooden roofs. It is understood that, as pressures built up, the vents opened and released the highly flammable vapors, which spewed forth in the form of fine spray where they were carried by the light breeze (said to have been about 5 MPH at the time) over the adjoining service building toward the condenser building, to its north, which was being operated at the time.

Just how much the weather conditions that evening contributed to the outcome is problematical, but it is the opinion of some authorities that the prevailing high humidity, without rain, helped to retard dissipation of the fumes and vapor as they reached the open air from the tanks. These fumes and vapors, being heavier than air, settled over the service building and occupied the area between it and the condenser building.

Burning Vapors Engulf Service Building—Trap Occupants

At 11:26 P.M., ignition from an undetermined cause, touched off these vapors which had lodged in the lower level of the run-down room in the condenser building, causing a terrific explosion and stopping all clocks in the plant. This blast took off practically the entire corrugated iron roof of the huge condenser building, scattering sections over a wide area (see photograph). Almost immediately, the service building was enveloped in flames, trapping its occupants, most of whom were disrobed preparing for showers at the time. Of the ten men, nine immediately succumbed to the flames; the tenth managed to make his exit by way of the fire escape at the front end of the structure, his clothing afire, but he was so badly burned that he died later.

The burning vapors flashed back to No. 43 tank, reported to be their chief source and this tank and No. 42 were ignited at the top, while the entire 150-foot long service building was transformed into a roaring furnace. Fire also attacked a part of the condenser plant.

The concussion of the blast was felt in some places 15 miles distant. Residents of upper Manhattan caught the tremor and observed the corresponding flash in the sky. Two workmen, walking on the river bank several hundred feet distant, were blown into the river but escaped without more than the ducking. Excited persons over a wide area pulled fire alarm boxes. Fire, police headquarters and newspapers were deluged with inquiries into the trouble.

Prompt and Effective Work of Fire Fighters

The Kearney Fire Department received the first alarm from the plant at 11:29 and immediately responded with three engine and one ladder companies, under command of Fire Chief William Wandras.

Chief Wandras had proceeded but a short distance en route to the fire when he caught the full significance of the flare in the sky—a different glow from that which normally characterizes the night operations of the big plant. He at once stopped his car and at 11:32 notified headquarters by telephone to send in a second alarm. Upon his arrival at the fire ground a few minutes later, after a quick size-up, he ordered a third alarm, calling aid from Jersey City.

These alarms brought into action five engine and one ladder companies from Kearney and two engine companies—7 and 15—from Jersey City under the command of Battalion Chief Duffy. Al-

(*Continued on page* 416)

Scene of Fatal Kearney Explosion and Fire

1, 2, 3. Storage tanks of up to 1,500,000 gallons capacity undamaged but exposed to fire. 4. Storage tank for products, 30,000 gallons capacity, exposed to fire from service building (6-T) and tanks 42 and 43. 5. Pieces of condenser building metal roof (10) blown to top of tanks. 6. Laboratory, first floor of service building. 7. Machine shop, first floor, service building. 8. Where most of bodies were found. 9. Locker rooms, second floor, service building. 10. Condenser building (partially shown), where ignition of vapors occurred.

Faster Roll The Farm Fire Fighters

By O. A. FITZGERALD
University of Idaho, Moscow, Idaho

TWELVE minutes in the 228-square mile Kittitas County, Washington, Rural Fire District No. 2 one day last summer showed that city firemen no longer can claim a monopoly on speed. Rural firemen move swiftly too—especially in Washington.

At 4:15 in the afternoon a call came from the extreme northern end of the district, about 7 miles from the district headquarters at Ellensburg. One truck headed north. Five minutes later, at 4:20, another call came from a farm about the same distance south of town. A second truck sped south. Seven minutes later a third call came from still another part of the district.

The southbound truck was rerouted to the third alarm and the district's third truck took to the road to the southern fire. Fast trucks, equipped to handle any kind of a fire, and constantly in touch with home base through two-way radio, paid off in those 12 minutes. Not one of the fires had a chance, yet every one could have done thousands of dollars worth of damage.

Those same busy 12 minutes also revealed how swiftly Washington's farm fire fighters have moved in the direction of providing equipment and skill to handle all kinds of fires. One fire was on a brushy hillside, threatening grain fields and grazing land; another started from a leaking gasoline line in a hay stacker motor; while the third was in a farm building. Rural fire units now are ready for any kind of a fire.

Washington's 100 rural fire units own $1,000,000 worth of mobile equipment, ranging from small tanks on trailers to big trucks of the very latest design. All of this has come since 1942, when the state, under the leadership of the state fire marshall, opened an intensive drive to prevent destructive fires in the grain fields. Then there were but two farm districts—with no equipment.

"During the war, when the emphasis was on saving grain, the units got along with improvised tank trucks," explains Leonard L. Burgunder, deputy state fire marshal, who has directed the drive. "Since the war those home-made rigs have gone into the discard and districts now are getting commercially made outfits designed for their specific needs and to work on structural as well as field fires."

In their pioneering in rural mobile equipment, Washington districts found that getting speed in farm fire fighting is considerably more than just "buying a shiny new fire truck."

"No city department can get by with one type of equipment," says Burgunder. "One city may need a different type of truck from another. It's the same way in rural districts. Each has its peculiarities in terrain, roads, mileage distances, and types of fires likely to predominate. All these factors are being considered by the farmer-commissioners in getting new equipment."

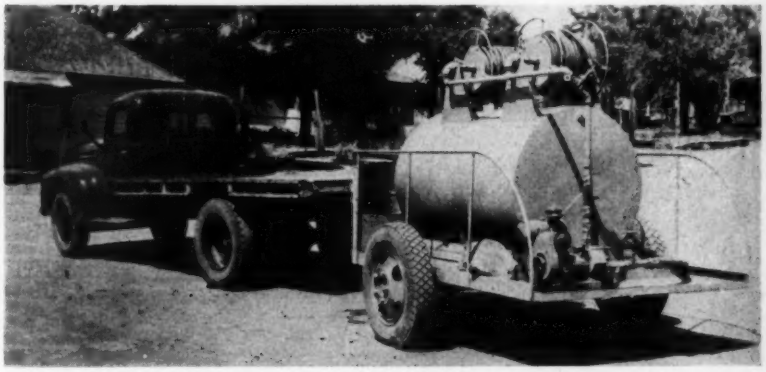
One of the oldest districts learned that lesson the hard way. In a wave of enthusiasm it bought a 4-ton truck with 10-speed transmission, a long wheel base, and carrying 1,000 gallons of water. Theirs was an impressive machine but the district soon found that a surprising number of calls were to field fires necessitating driving across rough pastures—certainly no place for that truck.

Following that experience, the district quickly added a 1½ ton truck carrying only 300 gallons of water. In addition to its ability to roll over rough land, this truck can hit 60 to 70 miles an hour on good roads, reaching a fire 10 or more minutes ahead of the larger truck.

"Strategy of our districts, in adding new equipment, will be to develop an alarm system similar to those in big city departments," Burgunder explains. "There will be first, second, and even third alarms. First alarm will bring a light pickup within a few minutes. A larger truck carrying more water will come on the second alarm, to be followed if necessary by a third alarm bringing a 1,500 gallon rig."

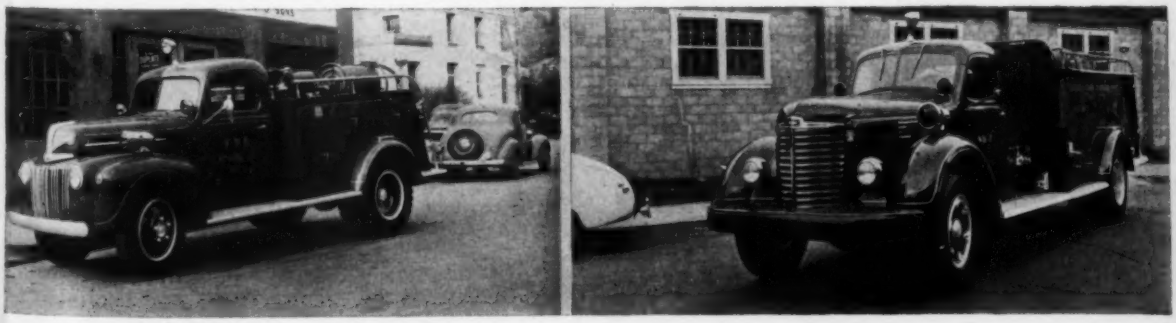
Pointing in that direction, Spokane County District No. 3, Cheney, will have 10 pieces of mobile equipment in operation this year, ranging from a swift pickup with only 100 gallons of water to a big truck carrying 1,500 gallons and a pump capable of shooting that water out at a nozzle pressure of 600 pounds. The big unit also has all the ladders and other equipment necessary on structural and grain elevator fires.

More districts, Burgunder reports, are going in for the light pickups carrying



Trailer Unit Has Proven of Great Value in Some Districts

The unit is taken to fire by truck and then a tractor is attached in order to reach the fire regardless of terrain. Each trailer carries a 500-gallon tank and a gasoline-driven pump.



Left: Adams County Fire District No. 1. Light-Weight Fire Truck Can Navigate over Rough Terrain. Pump Is Mounted on Body, just Behind Cab. Right: Fire Truck Fitted with Large Booster Tank, Pump, etc., in Use by Lincoln and Adams Counties Fire District No. 3.

100 gallons of water. Their job will be to get there first and hold the fire in check while a larger unit is on the way.

Appearance of so much speedy mobile equipment has resulted in a high degree of inter-district cooperation. "Fires have brought together trucks from four or five different districts," Burgunder relates. "They certainly help one another."

Another innovation, which has smoothed out the rough spots in the rural fire units, is the pre-harvest fire defense meeting. Farmers gather for a complete review of their individual responsibilities. All of the district mobile equipment is on display and farmers are given a short course in its use and operation.

New ideas, suggestions, and regulations make their appearance at these gatherings. Here are some of the new pointers from the July, 1947, pre-harvest meeting in the Clyde District of Walla Walla County:

First, shovels are to hang from the side of the combines, where they can be quickly and easily reached from the ground. When a man needs a shovel in a hurry he doesn't want to have to climb on top a combine for it.

Second, the protective screens on tractor and truck exhausts are to be sleeves at least a foot long. Just fastening a piece of screen over the end of the pipe isn't enough. Only a long sleeve will withstand the exhaust heat during the harvest period.

Third, combines are to carry jacks and blocks so the tractor can be unhooked speedily on fire call.

Fourth, at night or when the harvest crew is on fire call, the combine is to be pulled into a plowed area.

When the meeting adjourned every farmer knew exactly what to do. Nothing was left to chance. In case of fire in the Clyde District, here's what will happen!

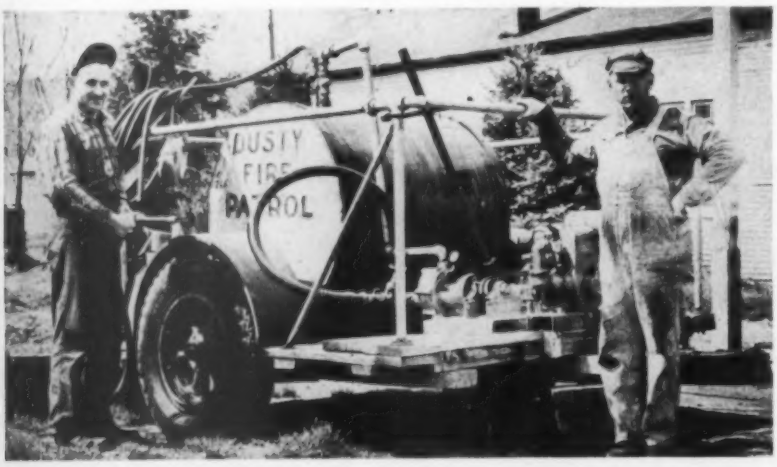
The report comes to the oil company plant where the truck is stationed. The farmer making the report gives the exact location of the fire, its type, wind conditions, and the road to take to get there the quickest. The farm wives take this complete report and spread it over the party lines.

Farmers within 2 miles of the farm bring tractors and harvest crews. Those 2 to 4 miles bring trucks and crews. While the district truck and the neighbors are coming the farmer with the fire rounds up plows, disks, and hitches. There's little danger of having half a dozen tractors and not a single plow or disk, as happened on one grain fire not so many years ago.

Some Units Have Pump Mounted on Rear Step as Shown in this Picture; Others Are Mounted Within Body.

Washington's all-out efforts in rural fire fighting, ranging from spectacular items such as a $14,000 truck just acquired by one district down to a seemingly minor point involving the location of a shovel on a combine, have paid off handsomely. Prior to 1942, the state seldom got by without seeing a million dollars worth of grain go up in smoke. Other farm fire losses were high too. Now the toll isn't a tenth that much.

A new and mighty welcome dividend came last year. It was a 10 per cent reduction in the premium on grain insurance. In total dollars that isn't much compared to the value of the grain saved but it reveals how far Washington has come in fire defense since the dark days before 1942, when most grain farmers themselves accepted the big fires as inevitable and insurance companies were pulling out of some districts because they were having to pay such huge claims.



The "Daddy" of All the Trailer Units in Washington. This Rig Was Built in 1942 by the Dusty District. It Has Proved Effective in both Grain and Range Fires. Designer and Builder of the Unit Is Rudolph Schott, Right, who Runs the Garage at Dusty. Holding One of the Two Hoses Is His Son, Reuben. Father and Son Are Chief Custodians and Operators of the Trailer Unit.

Fire Losses Decline for First Time

For the first time since March, 1944, monthly fire losses in the United States declined last month, the National Board of Fire Underwriters announced.

Needless destruction of property and resources by fire during April totalled $63,751,000, according to the National Board's estimates, a decrease of 6.29 per cent from losses of $68,029,000 during April, 1947, and a seasonal decrease of 14.1 per cent from losses of $74,236,000 incurred during March, 1948.

Even so, fire waste continues at an extremely high level compared with former years. Losses during the past 12 months totalled $703,262,000, which is greater by $10,627,000 than the all-time high $692,635,000 for a single calendar year recorded in 1947.

Fire destruction has continued at a rate of $2,252,000 a day for the first 121 days of 1948, the National Board's figures show. Thus, April's decreases should not mean there is any reason to relax the nation's defenses against fire.

April's losses bring the total fire destruction for the four months of this year to date to $272,518,000, which nearly approaches the total fire loss figure for the whole year of 1939.

These estimated losses under fire insurance policies are on an incurred basis, including an allowance for unreported and uninsured losses.

Board Releases Fire Data

A new study made by the National Board of Fire Underwriters shows that the estimated number of fires in American cities totalled 657,642 during 1947, according to the report of the Committee on Statistics and Origin of Fires, presented at the National Board's annual meeting, May 27, at the Hotel Commodore in New York.

Of this estimated total 360,901 were building fires, 235,873 were grass or brush fires and 60,868 were other nonbuilding fires. The estimates were based on answers to questionnaires sent to fire chiefs in 4500 American cities of 2500 population and over. No attempt was made to estimate the number of fires in rural areas.

Out of the estimated 360,901 urban building fires, 252,458 or 69.9 per cent occurred in residential structures, the survey indicated.

Further study of these figures is expected to throw light on the problem of fire losses which have been steadily increasing in dollar value until, in 1947, they set a new record of $692,635,000. However, the report said "the present year bids fair to set a new peak."

Stamp Honoring Volunteers Approved by President

The editors of FIRE ENGINEERING were advised on June 8, 1948, by Representative J. Caleb Boggs, that President Harry Truman has signed H. J. Res. 339 for issuance of a commemorative stamp honoring America's volunteer firemen. Representative Boggs was the author of the Bill, which was urged by Maryland and other interests of the fire service.

GRASS FIRE DEVELOPS INTO COSTLY NEAR CONFLAGRATION

Handicapped by Old Equipment, Rockford, Ill. Firemen, Aided by Neighboring Forces Control Threatening Blaze

By B. J. Garson

VIOLATION of the rule of never opening a door in the face of fire was a major contributing factor in a $300,000 fire which leveled a five-story furniture showrooms building, damaged five other buildings and resulted in the death of one man who leaped or fell from a third story window to escape the flames in Rockford, Ill., April 15.

A grass fire which ignited rubbish and in turn set fire to frame causeways between two buildings swept into Pierson's Factory Showrooms when clerks opened doors to see how bad the fire outside was, Fire Chief Wayne E. Swanson said.

A 40-mile-an-hour wind drove smoke and flame into the showroom building and in 20 minutes time the fire was so general in the building that Ben Johanson, chief shipping clerk, and his assistant, Carl Jacobs, were unable to escape by stairway.

They fought blindly to a window, while Ladder Company Capt. Frank Walsh hurriedly ordered a ladder placed at the window to rescue them. However, just as the ladder was lifted, the two men fell or jumped. Johanson died of internal injuries just 24 hours after he plunged from the window. Jacobs was in serious condition but was expected to recover.

Alarms Sounded in Rapid Succession

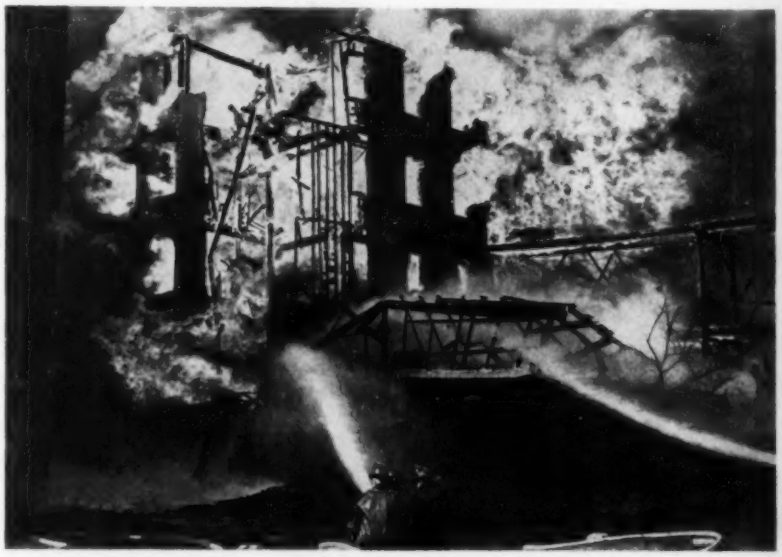
The alarm came in at 2:41 P.M., as a grass fire, and Engine Company No. 4, scarcely a block away, arrived to find the frame causeways already in flames. Chief Swanson and Assistant Chief Thomas Hafey who were making a round of the fire stations were only two blocks away from the fire when they heard an explosion and saw the smoke mushroom into the sky.

At 2:43 P.M., all available equipment in the city was called to the fire, and off-shift firemen summoned to man empty stations and to assist at the fire.

With the fire on the edge of the extensive 7th Street business district and just across from storage sheds of two lumber companies, Swanson asked for help from neighboring cities and rural areas lest the driving wind set the whole area ablaze.

Freeport, Belvidere and Loves Park, Ill.; Beloit, Wis., regular departments as well as rural companies from New Milford and Rock River, responded. Out-of-city firemen manned major local fire stations and fought several other fires which broke out while all Rockford equipment was at the big blaze.

Police estimated that 25,000 persons watched the showrooms fire—third conflagration in Rockford in slightly more than a year. Last March 12, another business district was threatened by flames that caused approximately $300,000 damage and on March 12, 1947, a series of buildings, including an old piano company plant, was leveled with a $750,000 loss.



South Walls of the Pierson Factory Showrooms Building Are Shown Crumpling Only a Half Hour After the First Alarm at Rockford, Ill.

This Photo Shows the Pierson Factory Showrooms Building at Rockford, Ill., Approximately Ten Minutes After a Grass and Rubbish Fire Ignited the Frame Causeways, at Right Center, and the Flames Shot Into the Building, at Left, When Clerks Opened the Doors to See the Fire

Rapid Spread Nearly Traps Occupants

The spread of the fire in the furniture showrooms building was so swift that nearly two dozen persons, including clerks and customers, narrowly escaped being trapped when the flames roared into the building through the opened doors.

Carl Pierson and Miss Ann L. Storm, company officers, were the last to leave the showrooms and found it difficult to open the front door because of the pressure inside from the smoke and fire.

Within half hour after the first company arrived, the south wall of the four and five story building collapsed. Fire moved to two buildings of the Lawson transfer and storage company, west and southwest of the destroyed building.

Firemen halted the blaze on the third story of one storage building and made a spectacular stop on the other when flames ignited an elevator cupola and started down the shaft. With the department's aerial truck busy at another spot,

firemen dragged hose up the side of the four-story building to get water under the cupola fire and stem it from crawling down into thousands of dollars worth of household storage items, including pianos and refrigerators.

Sparks from the blaze set dozens of small fires in a five block area and destroyed a storage building of an acoustical firm, located three blocks away.

The showrooms building contained kitchen furniture and equipment in the basement; plain and upholstered furniture on the first floor; bedroom furnishings on the second; and storage and shipping departments on the third and fourth floors. The building was of four stories in front and five at the rear where the ground sloped.

Engine 4 firemen hooked into a hydrant in front of the building but were driven away when the heat burned paint off the rig and blistered their faces during the first half hour.

The building was debris and smouldering embers in the basement two hours after the grass fire alarm was sounded.

The showrooms building was connected to a special furniture manufacturing plant by wooden, enclosed ramps at the first and second floors. Although these ramps also were destroyed, the fire was stopped before it entered the plant. Water damage was considerable in the adjacent building when sprinkler heads blew from the intensity of the nearby fire.

The savage intensity of the blaze which showed up the age of most of Rockford's fire fighting equipment resulted in a move to obtain an additional aerial truck and two pumpers through public subscription. Rockford's newest apparatus was a 750-gallon Mack pumper which arrived only two weeks before the fire. Other pieces range in age to 34 years.

Cupola on One of Two Lawson Transfer and Storage Company Buildings at Rockford, Ill., Is Shown Blazing from Heat from the Pierson Building. The Pierson Building Is Hidden by the Storage Building at Left in the Picture, but White Smoke from Its Flames Can Be Seen in the Background. At Right on Roof Can Be Seen Firemen Who Dragged Hose Up the Side of the Four-Story Storage Building to Reach the Cupola Fire Because an Aerial Truck Was Busy at Another Spot in the Fire

Toronto Fights Three-Alarm Warehouse Fire*

Two large warehouses at the corner of Jarvis and Adelaide streets in Toronto, Canada, were destroyed and other property damaged by a stubborn fire that threatened the entire block and gave the city's fire-fighters over eight hours strenuous work.

The fire, of undetermined origin, was discovered when an explosion blew out windows of three-story structures housing a printing plant and produce warehouse on the Jarvis street side shortly after midnight. The buildings were over 100 years old and were constructed of wood and brick, with heavy wood beams.

When the first section of firemen arrived from the Lombard street fire station, only a block from the fire, the entire district was filled with smoke and flames were issuing from second floor windows.

*Based on information supplied by J. K. Lee, Toronto correspondent.

District Chief Taylor quickly ordered a second alarm, which was transmitted from high pressure box 24, Jarvis and King streets. This brought additional forces, together with Deputy Chief Albert Steen, District Chiefs William Culling, James Stevens and Eugene Torpy.

Two hose lines were taken into the building from Jarvis and two from the Adelaide street sides, while other streams were directed into the structures from the street level. An effort to use aerial ladders was complicated by the numerous high tension power lines and transformers located close to the burning buildings.

The first alarm was received at 12:48 A.M. and by 1:15 A.M. twenty streams were being operated on the fire from every vantage point. This heavy concentration of water, together with the weighty contents of some of the occupancies, threatened to collapse floors and walls and firemen were ordered from the structures, to fight the fire from the exteriors. The north wall of the brass foundry and part of the printing plant, on the Adelaide street side, bulged under the tons of water, and firemen were ordered withdrawn to a safe distance by Deputy Chief Steen. Shortly afterwards the roof and a part of the wall caved in, at which time the fire gained added headway. A third alarm was sent in by Chief Steen at this time (1:22 A.M.) which brought Fire Chief Peter Herd and reinforcements. Additional lines were brought into play from adjoining roofs and the fire was confined to the two main buildings.

By 3:00 A.M., over 100 firemen and nineteen pieces of apparatus were operating at the scene. At about 4:45 A.M. the blaze was under control and some companies were returned to their stations. At 8:30 A.M. a single hose truck and crew remained and this force picked up at about 4:00 P.M.

Only one fireman was injured, and he not seriously, as a result of a fall from

Toronto Firemen Control Threatening Blaze with Heavy Streams

Operations at three-alarm, $100,000 warehouse fire were complicated by high tension power lines.

a ladder. He was given first aid on the spot by Dr. Ralph, fire department doctor, and removed to St. Michaels hospital.

Additional police were summoned to control the large crowds of spectators and maintain traffic. The loss was estimated at $100,000.

The chronology of alarms and response was as follows:

12:48 A.M.—Telephone alarm: Engs. 4, 5; Ladder 5 (aerial); High Pressure 2; District Chief Percy Taylor.

12:52 A.M.—Second alarm: Engs. 1, 3, 7, 30; Squad 1; High Pressure 1; Ladders 1 (aerial), 7; Gasoline Supply Truck; Deputy Chief Steen; District Chiefs, W. Culling, J. Stevens; Dr. Ralph; Chief of Motor Division; Emergency cars of gas and hydroelectric company.

1:22 A.M.—Third alarm: Engs. 2, 10, 11; Ladders 2, 10 (aerials); Chief Peter Herd; Fire Marshal Sam Hill.

A total of twenty 2½-in hose lines, together with four high pressure lines, were used.

NATIONALIZED FIRE SERVICE TERMINATED IN GREAT BRITAIN

Control Returned to Local Units on April 1; Finance Problem Causes Dissension

By Arthur V. Pendragon

THE British Fire Service Act which received Royal Assent last year, became effective on April 1. For the past months local authorities in England and Wales had been engaged in preparing their fire defense organizations to assume responsibility immediately the nationalized Fire Service came to an end.

Readers of FIRE ENGINEERING may be interested to learn something of the difficulties which the British are having in "unscrambling the egg." Prior to nationalization there were about 1500 fire authorities; the new Act places the responsibility on only 141, some of which have already been combined, making the present number 133. This number may be further reduced if Home Secretary Chuter Ede exercises certain powers under the Act to compel amalgamation of fire defense where the population of counties or county boroughs (large towns) is less than 100,000.

Finance a Contentious Point

One of the most contentious points in the new scheme is finance. From the date the Act comes into force, fire authorities will have to raise 75 per cent of the cost of the Fire Services from rates, and only 25 per cent will be contributed by the Treasury. Though responsible for three quarters of the cost, fire authorities will not have a proportionate control of their fire brigades, for the Act reserves to the Home Secretary very wide powers regarding organization and administration of individual brigades. Many people are convinced that de-nationalization of Britain's Fire Service is in name only, and that the central government is still maintaining the controlling interest. This condition is manifestly unfair in view of the meagre Treasury grant.

Another administrative problem for the new fire authorities arises out of pre-war control. Prior to 1941, councils of county boroughs (large towns), municipal boroughs and county district councils (urban and rural areas having populations under 50,000), maintained fire brigades. Under the new scheme, only county councils and county borough councils have the right to provide fire cover. It is obvious therefore, that the majority of the new fire authorities have had no experience in administering Fire Services, and this may lead to severe "teething troubles" unless foresight and imagination are exercised. Set against this are the recent appointments of Chief Fire Officers, all men of wide experience both under local authority control prior to 1941, and in the National Fire Service.

How the New Schemes Will Work

Local authorities in the United Kingdom are working against time to ensure there shall be no cessation in fire cover when they take over from the National Fire Service on April 1. In Middlesex, the county embracing many suburbs adjacent to the metropolis, an extensive scheme has been worked out mainly on the existing organization. It provides for an almost wholetime brigade with perhaps a small number of retained or volunteer firemen to operate certain additional appliances at certain stations. Some fire stations at present not in commission will be reopened, and six new ones will ultimately be built. The Middlesex scheme includes plans for mutual assistance with London and neighboring counties.

In arranging fire cover for towns and villages within their areas, county councils are meeting opposition from the smaller authorities. Arnold (Nottinghamshire) asked for the county scheme to be amended because it was considered that six wholetime firemen were not sufficient. Hitchen (Hertfordshire) was also concerned because the draft proposals for Hertfordshire provide only ten full-time and 121 part-time firemen, six major pumps, eight water tenders, a pump salvage tender and a light stack drag, to cover an area of 112,000 acres with a population of 94,000 and 29,000 properties. Quite another view was taken by Lincoln City council when proposals for two separate fire stations manned by forty-five full-time and twenty-five retained personnel were put forward. A councillor said the estimated cost of $60,000 a year and the particulars of the service were too elaborate, and he was surprised no mention of industrial fire brigades and no scheme for mutual aid between private industrial and corporation Fire Services had been planned. Another councillor wondered why 70 men were now needed in the fire brigade when 26 were sufficient before the war; a city alderman considered one station should be sufficient for a city the size of Lincoln. Dissatisfied with the draft scheme, Lincoln City council referred it back for further consideration.

Cost of the New Schemes

Cost of the new Fire Services is troubling many authorities. In East Sussex the estimated total cost is $512,000 a year, but the government grant of $128,000 and $2,000 from various rents reduces the charge on the general county account to $384,000. This figure was based on National Fire Service peacetime requirements approved by the Home Office last September. According to the Chief Fire Officer designate this was the minimum charge for proper fire protection in the county. A councillor said that $80,000 could be saved in a full year by getting up the strength of retained firemen, and regaining much of the local interest which existed before the war. One emphatic view was taken by a member of Hythe (Kent) corporation; who remarked that it would be cheaper to let buildings burn than pay $2,000,000 a year for the new county Fire Service.

There have been complaints from some local councils of the lack of firemen allocated to particular areas, but on the other hand the appointment of staff officers as suggested by the Home Office in draft schemes has been criticized as unnecessary, and wasteful of manpower.

Volunteer Firemen

Generally speaking, the new fire authorities are anxious to employ more volunteer firemen than the National Fire Service has considered advisable. Rural authorities in particular are contemplating the wider use of part-time firefighters as a means of offsetting the increased cost of the new Fire Service. Kesteven (Lincolnshire) county council is to have only 16 full-time firemen at the headquarters station in Grantham, but 140 volunteers at the eight rural stations in its area. The council has specifically stated its desire "to encourage the volunteer firefighter." Littlehampton (Sussex), councillors have deplored the proposed draft establishment which they consider to be ". . . extravagant, both in manpower and cost. . . ." Their firefighting force under the new scheme will consist of six full-time and 20 part-time men, yet before the war they had an efficient fire brigade of only one full-time officer and thirteen retained firemen. Littlehampton thinks the new Fire Service in its area could be run mainly by part-time firemen.

The latest news is that Brighton Town council have thrown out the fire scheme, lock, stock and barrel as a pro-

test against its cost of $200,000 a year. The council wants to know why the new scheme should cost so much more than their pre-war brigade which was run for $64,000 per annum. It is expected that the Home Secretary will now enforce a combination scheme for Brighton county borough and East Sussex county council, and the town will have to pay its contribution under any circumstances. The protest has, however, shown the feeling against "cut and dried" central schemes which do not allow of local alterations and economies.

At the Start of Denationalization

The whole vexed question of administration and finance in connection with the new Fire Service has been aptly summarized by one of Britain's local government journals, "The Surveyor," in the following words: ". . . Generally, the country districts are divided in their desires that the cost of fire defense shall not rise, that each district shall have adequate protection and equipment for resistance to fire, that the number employed as firemen shall not be excessive, but that each place is nevertheless, guaranteed a sufficiently numerous personnel . . . " The journal goes on to say that, ". . . probably no other question affecting local authorities calls for such expert, meticulous and highly proficient organization as will the requirements of the new firefighting defenses. That the district authorities give the matter an almost irritating degree of attention is a fact which should cause satisfaction to county councils and the Home Office."

PLASTICS PLANT DESTROYED BY EXPLOSION AND ENSUING FIRE

Five Persons Killed and Many Injured When Waltham, Mass., Factory is Wrecked by Dust Explosion

By Charles L. Hanson, Jr.

FIVE employees were killed and more than thirty injured, several critically, when a dust explosion and fire destroyed the Makalot Plastics plant in Waltham, Mass., on March 6, 1948. The building was owned by the Interlake Chemical Corporation of Cleveland, who run a chain of chemical manufacturing operations. This particular plant was engaged in the manufacture of plastic molding powders for use in making plastic dishes, radio cabinets and similar articles. Chief among the round-the-clock operations carried on were: 1. resin making. 2. hammer milling to pulverize the resins and 3. blending to mix the powdered resins with fillers, extenders and coloring materials.

The plant, a two story, stucco-covered cement block structure, was located on South Street near the Fitchburg Division of the Boston and Maine Railroad in the Roberts district, which is an uncrowded section of countryside between Waltham and Weston. The force of the blast was felt for miles around and many window panes were either blown in or sucked out by the concussion.

The time of the blast, fixed by records on the nearby Boston College seismograph at 11:07 P.M., was particularly unfortunate because more employees were present at that time, due to the 11 P.M. change of shift than would have been the case either earlier or later. Some who were caught in the locker room at the time of the blast escaped death by the narrowest margin.

Witnesses said the whole plant appeared to burst into flames at once, shooting an enormous column of flame skyward. Minor blasts followed the first one and in a short time the fire completed the destruction.

Fire apparatus reached the scene soon after the blast, in spite of the fact that fire alarm, electric power and telephone lines passing close to the building were disrupted. The Fire Department radio proved its value in summoning extra apparatus to the general alarm, along with ambulances to carry the injured to local hospitals. Curious sightseers flocked to the scene in such numbers that their cars seriously jammed the two lane, snow-banked South Street approach to the building. This not only hampered incoming fire apparatus but made necessary a rerouting of ambulances from a hospital three quarters of a mile away to another three miles distant.

Damage to the plant has been estimated by Chief Neal to be $150,000. Further damage was suffered by workmen's cars parked near the building and by a neighboring rivet-making plant and a salesbook and business form printing concern. Of the few houses located on the edge of the residential district within range of the blast, damage was mostly from broken windows.

Photograph by Charles L. Hanson, Jr.

This Pile of Rubble Is All That Remains of a Plant Which Manufactured Plastic Moulding Powders

Photograph by Charles L. Hanson, Jr.

Crushed Automobiles Stand in Pools of Colored Water at the Scene of the Blast in Waltham

This explosion has been described as a "low pressure blast" which blew out the walls, collapsing the roof. This theory is substantiated by the pattern of window breakage in the neighborhood, plus the fact that none of the heavy equipment on the floor of the plant appeared to have been ruptured. It has been theorized that a high velocity explosion would have torn a hole through the roof as it vented itself, leaving the walls standing. Sprinkler protection throughout the building was rendered inoperative by the blast.

Neighbors in the area indicated that several scares had occurred in recent months as workers fled the structure

expecting trouble but returned to work when nothing materialized. Within the last few weeks the Fire Department had been called to extinguish a blaze in the dust-laden building. In view of the number of men in the plant at the time of the blast, it was considered quite remarkable that any escaped at all.

Heavy Loss in Bridgeport Blaze

A two-alarm fire roared through the 15-acre Cilco Terminal Company lumber yards at Bridgeport, Conn., on April 22, causing damage estimated by Fire Department officials at more than $500,000.

Engines 2, 5 and 6, Truck 6, and Squad 6 responded on the first alarm. The second alarm brought Engines 1, 4, and Truck 5 to the scene. Fire Chief Martin J. Hayden was one of the first officers at the fire and took immediate command.

When firemen arrived, they found flames leaping across the 400-foot front of the main shed which contained prefabricated houses, machinery, a huge crane, a lumber carrier and quantities of supplies. In scarcely one minute the flames shot 100 feet into the sky and were visible from all parts of the city.

From the shed the blaze spread to the dock, firing two barges. Firemen halted the fire just short of a building containing highly inflammable oil and glue, located in the northwest corner of the yard.

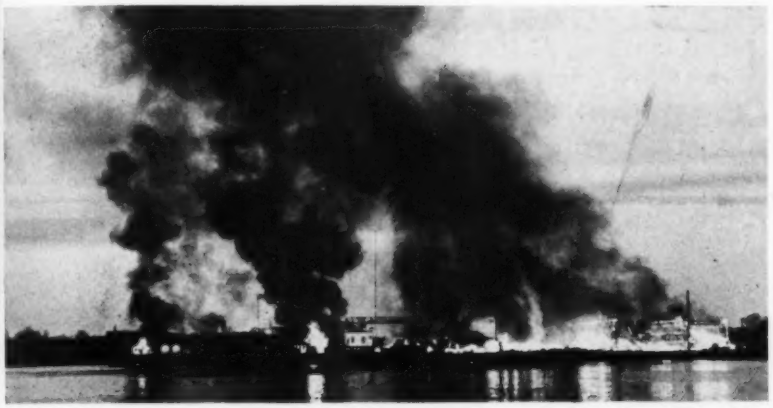


Photo Courtesy Bridgeport Post

Bridgeport Waterfront Fire City's Worse Since 1887

Fire, starting in huge storage building of Cilco Terminal at extreme right, spread over eight-acre area. Dock and lumber afire at right center; stacks of heavy creosoted timbers burning brightly, left of center; flames from burning barge at far left.

It was the most spectacular blaze in that city in recent years and the most disastrous since the Barnum and Bailey Winter Quarters fire in 1887.

Seven persons, mostly firemen, were injured as wind-swept flames razed the firm's main mill and storage shed, located on Seaview Avenue, along the city's waterfront. The shed, 400 by 350 feet, was destroyed, and two loaded barges of coal owned by the C. and O. Coal Company nearby, and vast quantities of lumber, piled throughout the area.

Within 35 minutes of the start of the blaze, first noticed at 5:50 P.M., the mill shop was skeletonized and the Cilco dock adjoining the shop was on fire. Flames spread generally northwest from the main building, driven by strong, shifting winds. Nearly the entire northwest part of the terminal was caught in the path of the fire.

Flying embers threatened scores of structures within a six-block radius of the yards, and ignited the roof of a house at Noble and Berkshire Avenues, two miles away.

Embers and intense heat hampered efforts of the Bridgeport firemen to control the conflagration. At least three barges, in addition to those destroyed, were damaged by fire and cast adrift in a channel fronting the terminal. Numerous small shacks in the yard were partially consumed by flames.

The first alarm was sounded at 5:50 P.M., from the Company's private box, 519. The second alarm at 5:54, was radioed to Headquarters by Asst. Chief George A. Butler, enroute on the first alarm.

The Navy's ELSM (Electronic Landing Ship Mechanized) under command of Lieut. Ralph Hamilton, moored alongside the Cilco dock and directed 14 hose lines into the blaze. Personnel from the ship were aided in the firefighting by the crew of the Navy LST, training vessel, in command of Commander Frederick F. Daley.

According to Fire Chief Martin J. Hayden, the fire may have been caused by a short circuit in electrical equipment in the main mill and storage building. Recall was sounded at 8:06 P.M.

TOM MAGNER

Two Firemen Drowned in Rescue Effort

Two firemen, members of the Huntington, W. Va., Fire Department, drowned in the swollen Ohio River in an effort to rescue the bodies of three boys who had drowned May 22, 1948.

The three unidentified boys, who had ventured out on the swift-moving waters, were all drowned when they were thrown into the river.

The firemen, Lieutenant Leonard Hartz and Fireman W. Ernie Booth, set out in boat powered with an outboard motor to attempt to locate the boys' bodies less than ninety minutes after they had disappeared. The motor failed to start and the craft was carried by the swift current into a barge of the Ohio River Co. moored with other barges at a ferry landing.

The firemen's boat struck the barge sideways and upset. Police who had accompanied the firemen on the call, said both Hartz and Booth jumped and started swimming for shore but were pulled under.

Records Broken at Northwest Fire School

The Northwest Fire School celebrated its twentieth anniversary with a three day session, May 3 to 5, in St. Paul, Minn., which was attended by 527 participants. The School was held in the auditorium of the State Office Building, and seats were at a premium throughout all the meetings.

Governor Luther W. Youngdahl of Minnesota, gave an inspiring address, stressing the Governor's Fire Prevention Conference and other matters of fire prevention and the fire service.

Following the fire prevention-minded

Photo Courtesy Bridgeport Post

Flaming Frame Mill and Storage Shed Defies Bridgeport Firemen

Stocks of pre-fabricated houses fed fire which started in vast storage shed of Cilco Terminal and spread destruction over wide area. Loss $500,000. Navy crews aided Bridgeport fire fighters.

governor, who received an ovation, Richard E. Vernor of the Western Actuarial Bureau, delivered an enlightening talk "How to Kill a Meeting."

Other outstanding features of the School included a demonstration of the extinguishment of liquified-petroleum gas fires in which firemen themselves participated under actual fire control conditions. Another demonstration consisted of igniting two bales of rags and extinguishing them with a wetting agent.

On May 4 the Minnesota Fire Prevention Association, together with the Fire Underwriters' Association, sponsored a dutch lunch for the entire group.

According to Leonard C. Lund, Deputy Commissioner, Fire Marshal Division, who has spearheaded Northwest Fire Schools, the sponsors hold high hopes of still further expanding the School next year.

WET WATER PROVES EFFECTIVE ON FIRE INVOLVING FRAME GARAGES

Single Line from Booster Tank Proves Sufficient to Bring Blaze Under Control Quickly

CASES attesting the effectiveness of wetting agents or "wet water" continue to multiply. Latest to reach this journal is that of the Town of Mamaroneck Fire Department, Weaver Street.

This department, which serves approximately 8,000 persons in wealthy Westchester County, New York, is an active member of the Fire Chiefs Emergency Plan of that County.

The department consists of 6 companies, having a total of 80 volunteers, and eight paid firemen. Its chief, George Burton.

The department equipment includes three pumpers, two ladders and a Patrol or squad unit as follows: Engine 1—500 GPM, American LaFrance 1921, 40-gal. booster; Engine 2—1000 GPM Seagrave, 1929, 100 gal. booster; Engine 3—500 Pirsch (reconverted standard war surplus unit) 175 gal. booster. Ladder 1—American LaFrance, 1942, 100-ft. aerial; ladder 2—American LaFrance, 1924 (re-built) city service, 135-gal. booster. Patrol—500 GPM Mack (front mount), 1937, 175-gal. booster.

The department is equipped throughout with latest type fog and multi-use nozzles, for 1-in., 1½-in. and 2½-in. hose, and delivering all the way from 15 GPM to 500 GPM.

Following a field demonstration by the department last autumn, at which time wet water was tried out, two of its units were equipped with this extinguishing agent. They were Engine 3 and Ladder 2, both of which respond to most of the alarms, including all grass and brush fires, which keep the department busy, particularly in the spring and fall periods. The wetting agent was mixed with the contents of the booster tanks of both these pieces of apparatus.

Although the two units have been called upon to fight numerous fires, and the personnel believed the wetting agent efficacious, little opportunity to demonstrate its full efficiency arose until March 25 last which proved to be one of the busiest days of a busy month—so busy, in fact, that for the first time in many moons, the Emergency Plan through its County Fire Control Center, was called on to locate an out-of-town pumper in the Weaver Street fire house (Engine 2, Larchmont Fire Department).

The action on the day during which "wet water" established its value, took place largely between 1:00 A.M. and 6:00 P.M. The chronology of alarms and response follows:

11:47 A.M. Box 126; Still alarm—Engine 3 Brush fire.

11:57 A.M. Box 363; Still alarm—Engine 3 Brush fire.

1:00 P.M. Box 242; Still alarm—Engine 3, Brush (Company returned at 1:15 P.M.)

1:15 P.M. Box 437; Still alarm for brush fire, followed 7 minutes later by full alarm. This brought Engine 3 (which had just arrived back in quarters) on the first call; Engine 2 and Ladder 2; leaving Engine 1 and Ladder 1 and the Patrol in quarters.

Location of this fire was given as the "Prince Estate," on Old White Plains Road, and the department was informed that it was a "grass fire."

The Prince Estate covers many acres of ground on which are located residences, barns, outhouses of different type, and a series of five wooden structures, of which four are used as garages.

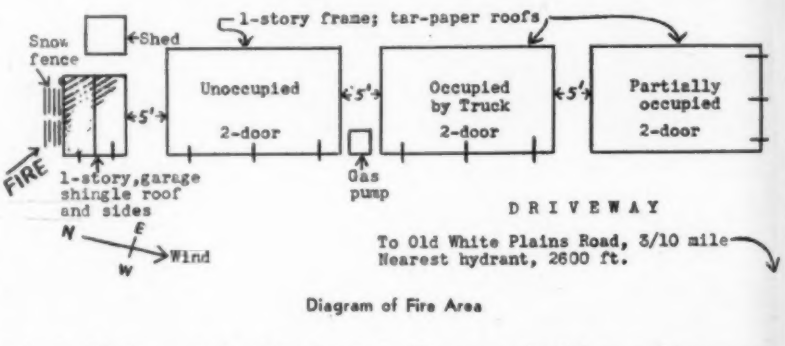


Diagram of Fire Area

These are situated on a driveway, approximately 2,000 feet from the nearest highway, Old White Plains Road, and fully 2,600 feet from the nearest hydrant. The Estate itself is approximately 3.7 miles from the firehouse.

There are no water supplies available on the estate for fire fighting.

The first unit to arrive on the scene, Engine 3, with a driver and half a dozen volunteers, found that the grass fire had already spread, before a good breeze, to involve the windward of the four garages, and a rolled-up snow fence which had been stored against its exterior wall. As will be seen by the illustration, this, the smallest of the four garages, was frame, shingle-covered and roofed. It contained miscellaneous storage including porch furniture, awnings, etc. The entire windward side of the garage was ablaze and the fire had possession of nearly one half of the windward roof gable. Fire was attacking the leeward gable, approximately six feet distant from the adjoining garage. A small shed in the rear was about ready to ignite from radiated heat.

There was no time to attempt to lay hose lines and hook up a relay operation. The weather conditions and building construction favored rapid extension of the fire. Upon the operations of this first crew depended the success of the struggle to control the fire. By the time the additional help could arrive, it obviously would be too late.

Photo Courtesy Town of Mamaroneck Police Dept.

Wet Water Saved This Row of Frame Garages in Westchester

Three frame two-car garages, five feet apart, were threatened on Prince Estate, Town of Mamaroneck, when a one-car garage to windward was ignited by grass fire. Note filled gasoline pump between second and third garages. Large residence and other buildings, not in picture, also were exposed. Total loss $300.

The men of Engine 3 and Engine 2 and Ladder 2 (which arrived in response to the full alarm after Engine 3) did not know it, but almost immediately after they left the firehouse to respond to Box 437, the Prince Estate, an alarm was received for another fire, from Box 413 on Fenimore Road about one and three-quarter miles from the Prince Estate fire. The Patrol was dispatched to fight this blaze, and the County Control Center was then requested to dispatch a pumper from nearby Larchmont to locate and cover the Town.

The men of Engine 3, meanwhile, had rolled their pumper into operation, utilizing the booster line and fog nozzle. Both fog and straight stream were used to knock down the fire on the involved garage, following which the burning snow-fence and the nearby blazing grass areas were extinguished.

The entire fire extinguishment operations required only the booster line, using a one per cent solution of wetting agent. Some burning grass was extinguished with brooms, chief Burton conserving his booster tank supply in case of extension of the fire to any of the other wooden structures on the grounds. The booster line of Ladder 2, was not used, and this unit and Engine 2 stood by.

Investigation, after overhauling was completed, showed that no fire had communicated to the interior storage and further, that there was absolutely no water damage to the contents. In addition, it was noted that the wet water, when applied to the side-wall of the adjoining garage (to leeward) instead of quickly vaporizing under the radiant heat, appeared to penetrate the siding, setting up a barrier to the heat waves and sparks, much more effectively than would have been possible with plain water.

According to Chief Burton, the total loss on garage and snow fence was $300. The value of the garages and shed, threatened by the fire (exclusive of residences, barns, etc., that might have been involved had the entire row of garages burned) was $9,000. "I have no hesitancy," said Chief Burton, "in saying that wet water in this particular fire saved that amount of property, and at a cost which was insignificant."

Lakewood, N. Y., with Population of 2,944, Has a Very Effective Fire Department. Here's the Apparatus Lined Up in Front of New Fire Station

Town Has Efficient Fire Department

Lakewood, New York, is located on Chautauqua Lake, four miles from the City of Jamestown. The Village is primarily residential and the latest census shows a population of 2,944.

The Lakewood Fire Department is in charge of Chief William R. Vincent and consists of two companies; the Lakewood Chemical Co., Inc., and the Lakewood Hose Co. No. 1, Inc., together totalling an active membership of 90 volunteers. There are two assistant chiefs of the Department, and a captain and lieutenant of each company, all elected by the members annually.

The equipment consists of three pieces of apparatus and a rescue boat. Engine No. 1 is a 500 gpm triple combination pumper, purchased in 1946. It carries 400 feet of 1½-inch hose, 200 feet of which are always hooked directly to the pump; a 350-gallon booster tank and 200 feet of 1-inch booster hose along with miscellaneous equipment. This engine was partially rebuilt by the firemen and is used to control a fire, if not extinguish it, until heavier lines are laid or more water is brought in by successively responding apparatus.

Engine No. 2 is a 500 gpm triple combination pumper, delivered in 1947. It carries 1,000 feet of 2½-inch hose; 200 feet of 1½-inch hose hooked directly to the pump; a 400-gallon booster tank; a 35 foot, 3 section, aluminum ladder; 150 feet of ¾-inch booster hose; a 1500 watt portable lighting outfit and other equipment.

No. 3 is a 500 gpm semi-quadruple combination pumper, delivered in 1926. It carries 1,000 feet of 2½-inch hose, 115 feet of ladders, an 80-gallon booster tank and 200 feet of ¾-inch booster hose as well as miscellaneous equipment.

Engines No. 1 and 3 were purchased from company funds and were no burden to the taxpayers. However, Engine No. 2 was purchased and the new fire station built this past year at a cost of $60,000 to the village taxpayers.

Through donations and the profits from social functions, the Fire Department purchased and equipped for rescue work a 28 foot speed boat powered by a 150 h.p. marine engine. This equipment is kept in a lakeside boat house that was built with Department funds last year. The boat house has a 32 foot slip, chain hoists to remove the boat from the water for winter storage and a first aid room. Calls for rescue work are answered anywhere on the 21-mile lake.

A general alarm 5 h.p. siren on top of the fire station and two 1 h.p. sirens located at the East and West ends of the Village serve as the alarm system. The large siren operates automatically whenever the number 888 is dialed on the Lakewood telephone exchange. The station phone is then answered to receive the location of the fire or rescue call.

The Fire Department not only protects the Village of Lakewood but serves a large rural fire district as well. The Village maintains a good hydrant system, but for fires occurring in the rural district, the Fire Department usually depends upon its booster tanks. For this reason both Engines No. 1 and 2 answer all rural alarms, and if the fire is serious, mutual assistance from nearby fire departments is freely and quickly given. In less than fifteen minutes, 2,000 gallons of water can be brought to the rural fire and then shuttle service is established to insure a continuous supply of water through two 1½-inch lines.

Photo Courtesy Town of Mamaroneck Police Dept.

Wet Water Nails a Threatening Fire—Saving $9,000

Quick work by Town of Mamaroneck Firemen, Westchester County, N. Y., using wet water, prevented involvement of row of frame garages when windward frame structure and rolled snow fence were ignited by grass fire. Note extent of char, frame exposures and remains of snow fence, almost fully consumed.

Simultaneous Cambridge Fires Prove Value of Mutual Aid

Two serious fires occurring within four hours of each other on the night of February 22, 1948, proved very conclusively the value of having well-established plans for mutual aid in a large metropolitan area.

A general alarm fire (Box 79) in a block of stores at Massachusetts Ave. and Dudley Streets, Cambridge, Mass., broke out about 10:15 P.M., and burned stubbornly for nearly three hours before being brought under control. Damage was estimated at $100,000, as the fire, which was caused by defective wiring, passed from the basement up through the wall between a grocery store and a tavern to the loft between the ceiling and the roof. In this three foot space, the fire travelled across the length of the block in a downwind direction.

Fire-fighting operations were difficult, requiring the frequent relocation of charged lines. Temperature of 12° F., heavy smoke and metal ceilings also were contributing factors. Occupancies damaged were: the Bowling Alley, a Tavern, First National grocery store, the Quality Shoe Store, and the Lewis Quality Shop—a dry goods concern. Several firemen were treated for smoke inhalation at the Cambridge City Hospital.

While this fire was still "in" an alarm was received from Box 541 for a residence fire at 48 Brewster Street in the well-to-do Brattle Street section of the city, located about a mile from the first fire. The first companies to arrive at the scene were Engine 2 of Belmont and Ladder 1 of Somerville, both of whom were covering in at the nearest fire stations. They found fire roaring out of the first floor windows at the back of the house, and promptly went to work.

Repeated searches of heat and smoke-filled upper floors of the two and one-half story, wooden-frame house by the Fire Department Chaplain, the Deputy Chief, and many firemen at great personal risk and punishment in the performance of their duty, resulted in the removal of six victims of the fire. All apparently died of suffocation, some while attempting escape. In view of the great headway gained by this fire before being noticed in the dead of night, the victims must have been beyond the help of any fire department before the arrival of the first apparatus.

As the owner of the house was in the blind and sash business, nearly every window of the newly redecorated residence was equipped with a storm sash over the regular window, more nearly sealing the house. As the fire progressed it moved toward the front of the house and up the stairs, spreading out into second and third floor rooms, finally breaking through the roof in spots.

Through fixed, predetermined mutual aid schedules, 6 engine companies and 2 trucks were available for response to the fire immediately, having covered in from Boston, Arlington, Belmont and Somerville, augmenting the Cambridge apparatus which stays in quarters during a general alarm. Other apparatus not needed at the store fire was ordered to the scene by radio and further assistance was sent from Boston and Somerville by special call. Without mutual aid, the first due companies would have had across-the-city runs to reach the scene.

CHARLES L. HANSON, JR.

Photo by Charles L. Hanson, Jr.

An Entire Family of Six Persons—Mother, Father and Four Children Between the Ages of Ten Months and Nine Years—Lost Their Lives by Suffocation in This Early Morning Residence Fire at Cambridge, Mass., on February 23, 1948

Photo by Charles L. Hanson, Jr.

Fire in the Loft of This One-Story Block of Stores Gave Firemen of Cambridge, Mass., a Stiff Three-Hour Battle in 12 Degree Weather Before Being Brought Under Control. Damage Was Estimated at $100,000. The Cause Has Been Attributed to Defective Wiring

Many Vets Train Under the G.I. Bill of Rights

More than 3,000 World War II veterans are training under the G.I. Bill to be fire fighters, a Veteran's Administration survey discloses.

Of the total, 1,302 are training on-the-job, and 1,796 are enrolled in fire fighting courses in educational institutions.

The VA survey lists occupational fields of some 2,000,000 veterans study-

(*Continued on page* 394)

New Haven Inaugurates New Modern Training School

Approximately 750 fire officers and civic officials from a dozen New England and Eastern states registered at the Training Grounds of the New Haven Fire Department, Saturday, May 22, 1948, to witness a day-long demonstration of the latest advancements in fire fighting equipment and methods.

The event signalized the formal opening of the department's reconstructed and expanded fire school and training center, and the culmination of Fire Chief Paul Heinz's dream for an installation that would permit firemanship training under actual fire fighting conditions, as well as the heretofore conventional "drill tower evolutions."

The event was co-sponsored by the New England Division of the International Association of Fire Chiefs; the New Haven Fire Department and City of New Haven, aided by a large group of manufacturers of fire control equipment, under the personal direction of Chief Heinz, Deputy Chief Thomas Collins (in charge of the School), and a large staff of department personnel.

From 9:00 A.M. until late afternoon, except for a brief pause for a buffet lunch served at nearby Engine 7's station (where many of the visitors bunked), one event followed another, most of them packed with thrills, including tests of water fog, fog foam and foam, wet water, and fire-retardent paint; demonstrations of underwater diving; modern fire detection and alarm transmission devices, and a parade of the city's latest apparatus, including its new surgical unit, mobile crane, pneumatic power unit, high-power sound truck, deluge trailer, etc. The climax came with a hot, smoky fire in a 2½-story cinder-block test building which was extinguished by a full two-alarm assignment, with firemen utilizing the latest fire control appliances.

Dramatic demonstrations included:

(1) Comparison of plain water vs. wet water in extinguishing large pit fires using solvent said to be "tolulol." The plain water fire eventually taxed efforts of four crews, using small and large Rockwood water fog nozzles, both low and high velocity. Time of extinguishment: 11 minutes. The wet water fire, using "Drench," but other conditions being the same, required only 2 minutes, 10 seconds, two crews armed with 1½-inch low velocity Rockwood fog heads on applicators doing the trick handily.

(2) Principles of modern fire detection and alarm notification, both with and without automatic sprinkler extinguishment. The units exhibited were "Atmo," "On Watch," "Sealand" and "Grinnell," all installed in the 2½-story test structure and operated under actual burning conditions.

(3) The latest in portable, gasoline-powered smoke ejectors—the "Homelite," which moved approximately 5,000 cubic feet of smoke and fumes per minute and, reversed, introduced even greater quantities of fresh air.

(4) Efficiency of fire-retardent paint ("Albi") in a hot fire. Two shacks were burned for 5 minutes; the one painted with "Albi" was only blistered, whereas the unpainted shack was destroyed.

(5) Both Scott "Air-Pak" and Mine Safety "Chemox" oxygen breathing equipment were operated by firemen under typical fire fighting conditions. Also, for the first time, by courtesy of Fire Chief Clement Murphy of the District of Columbia Fire Department, a new "turnout" coat especially designed to carry the all-purpose mask, and facilitate its use, was exhibited by a Maryland delegation headed by Captain A. M. Grunwell and Lieutenant Wolz of the D. C. Fire Department; Chief Joseph Giammatteo, Glen Echo, Md.; and former Chief Irving Johnson, Takoma Park, Md.

(6) Comparative tests of the newest nozzles, including the Callender Rifle Fog Nozzle; improved Barker Solid Stream Pipe, Mystery Nozzle, and others also were held.

(7) The New Haven Fire Department exhibited the latest model teletype unit, used by the department. The power amplifier employed to describe the day's events was the Dilks, also in use by the New Haven Fire Department.

At the New Haven Fire Training School

1. Fog-foam—Firemen lay a blanket of fog-foam, using the new Type FFF Rockwood Fog-Foam Nozzle. 2. Mask-coat—Master of ceremonies, Chief Paul P. Heinz, relinquishes the "mike" to Captain Grunwell, District of Columbia Fire Department, who describes the newest creation in firemen's turnouts, the coat that carries the all-purpose mask. The "masked model" is Chief Joseph Giammatteo, Glen Echo, Md., Fire Department. 3. Stream shaper—Fog-foam whitens the landscape and drill tower as spectators flee. A late Rockwood product to give length and pattern to fog-foam. 4. For false alarmers—New Haven is trying out this novel notice in an effort to curb the false alarm evil. 5. Real fire—First alarm companies swing into action as automatic alarms (shown on front exterior of structure) sounds raucous notification of blaze. Note fireman in foreground equipped with Safti-Shield plexiglass face protection. 6. Hot, hot!—Crews armed with applicators equipped with Rockwood low velocity heads and treated water (Drench) successfully wade into blistering Toluol fire.

MILLIONS OF DOLLARS TO BE SPENT IN FIRE SERVICE CONSTRUCTION

Over One Hundred Projects in Seventy-Three Communities Listed at a Cost of $13,443,000

By Harry Hewes*

MORE than a hundred new fire stations, drill towers, alarm systems and communications buildings are on the construction programs of 73 communities and will cost an estimated $13,443,000. They are described as essential public works for which the Federal Works Agency advanced $339,176, without interest, to bring the projects through the blueprint stages, so that construction can start when economic conditions warrant.

These fire fighting and fire protection facilities are among local public works which have been built in the last two years or which are on the reserve shelves of cities, towns and counties, to cost in excess of $2,000,000,000. The backlog for needed local public works in the last year has been set at about $5,000,000,000.

In theory these public works were to serve as a reserve, projects on which work could be started at once in the case of economic recession. But even where there has been little pressure for completing the plans the average elapsed time between initiation of the planning and approval of the complete blue prints has been 18.3 months. As a matter of fact, however, many of these public works were so necessary, because of the deferral of construction in the war years, that they have been put under construction, and this, of course, depletes the reserve shelf.

The FWA Advance Planning Program expired on June 30, 1947 with its parent legislation. It had been authorized as Title V of the War Mobilization and Reconversion Act of 1944. Bills that would restore the planning program for periods up to five years are now before Congress.

The fire public works projects cover a span from the combined town hall-fire-police stations in smaller communities, to undertakings to register, as in Evanston, Ill., Flint, Mich., Providence, R. I., and Cleveland, Ohio, within the half-million dollar range.

The planning table follows:

FIRE STATIONS—ADVANCE PLANNING PROGRAM

Location and Description	Estimated Cost
ALASKA	
Fairbanks—Fire station and garage	$190,500
*Juneau—Fire station	110,000
ALABAMA	
Gadsden—Fire station	63,600
*Prichard—Alarm system	35,537
ARKANSAS	
**Fort Smith—3 fire stations	195,250
CALIFORNIA	
*Inglewood—Fire station	56,700
**Long Beach—Fire station	58,300
*Long Beach—Communications Building	89,991
**North Sacramento—Fire, police station	31,776
CALIFORNIA (continued)	
*Oakland—3 fire stations	227,055
Oakland—Fire station	42,500
*Santa Monica—Fire station	121,815
COLORADO	
Longmont—Fire, police station	54,000
CONNECTICUT	
Simsbury—Station remodeling	31,680
FLORIDA	
*Miami—4 fire stations	170,000
GEORGIA	
*Arlington—City hall, police, fire station	33,000
*Montezuma—Police, fire station	345,000
Unadilla—City hall, police, fire station	25,380
IDAHO	
Salmon—Fire station, community hall	52,000
ILLINOIS	
Antioch—Town hall, police, fire station	82,500
Decatur—Fire station	85,000
Evanston—Police, fire station	575,000
*Grafton—City hall, fire station	22,772
Midlothian—Village hall, fire, police station	68,000
*Murphysboro—Fire station, jail, town offices	263,500
INDIANA	
East Chicago—Fire station	166,482
*Gary—Fire station	230,000
*Michigan City—Central fire station	167,540
*New Albany—City hall, fire, police	230,700
IOWA	
Des Moines—3 fire stations	123,200
KANSAS	
Kansas City—3 fire stations	203,340
Manhattan—Fire station	95,070
*Troy—Town offices, fire, police	31,150
KENTUCKY	
Fort Thomas—Municipal bldg., fire, police	175,000
LOUISIANA	
Franklinton—City hall, fire station	42,450
**Hammond—Fire station	48,747
MAINE	
Presque Isle—Town hall, police, fire	195,000
South Portland—Fire station	92,900
MARYLAND	
**Barton—Fire station	64,041
MASSACHUSETTS	
Cambridge—Fire tower	45,900
*Quincy—Fire station	137,635
*Medford—Signal system extensions	788,704
*Mendon—Fire alarm building	98,600
Springfield—Alarm headquarters building	132,500
Warren—Fire station	95,000
MICHIGAN	
**Flint—Fire stations, alarm bldg.	878,350
Grand Rapids—3 stations, drill tower	105,067
MINNESOTA	
Duluth—Fire headquarters	276,000
MISSISSIPPI	
*Pascagoula—Fire station	29,902
MISSOURI	
Kansas City—Radio communications bldg.	161,000
St Louis—4 stations	292,750
NEBRASKA	
*Omaha—2 stations	89,863
Omaha—2 stations	81,000
NEW HAMPSHIRE	
Portsmouth—Fire station	41,921
NEW JERSEY	
*Piscataway Township—Fire station	64,000
NEW YORK	
*Elmsford—Municipal building, fire, police	166,000
OHIO	
Cleveland—5 stations	400,000
*Cuyahoga Falls—Fire station	47,251
*Newton Falls—City hall, fire, police	150,000
OKLAHOMA	
*Elk City—City hall, fire station	424,212
PENNSYLVANIA	
Brentwood—Remodeling fire, police building	184,650
*Harrisburg—Drill tower	27,220
RHODE ISLAND	
North Scituate—Municipal bldg., fire station	224,190
Providence—7 fire stations	959,200
SOUTH CAROLINA	
*Chester—Fire station	60,986
*Denmark—Town hall, fire station	60,400
*Sumter—City hall, station additions	394,212
TEXAS	
*Amarillo—Fire station	44,900
Amarillo—3 fire stations	109,050
*Bay City—Fire station	37,412
Fort Worth—3 fire stations	130,900
Schulenburg—City hall, library, fire station	33,000
UTAH	
Clearfield—Municipal bldg., fire station	300,000
*Ogden—2 fire stations	261,500
VIRGINIA	
*Norfolk County—Fire station	55,800
WASHINGTON	
**Tacoma—Fire station	241,700
WEST VIRGINIA	
Morgantown—Fire stations	142,350

*Plans completed.
**Advance returned into U. S. Treasury.
Total Estimated cost.....$13,443,601
Funds advanced for planning.. $339,176

*Mr. Hewes is Field Representative, Office of Program Reports, Federal Works Agency, Washington, D. C.

Freak Fire Furthered by Flood Flaunts Wheeling Firemen

Fire and flood combined recently to give Wheeling, W. Va., firemen a nightmare experience as they struggled against heavy odds to overcome a blaze on Wheeling Island.

Companies 5, 6, 7 and 8 responded at 2:29 A.M. to an alarm at 109 So. Huron street, the residence of one H. Levin. Arriving at the scene the fire fighters found the house was entirely isolated by the raging Ohio River, then at flood stage.

Unable to bring apparatus within effective range, the quick-witted firemen procured small boats, fitted them with portable pumps and "embarked" into action. After a tough two-hour battle with the flames, which were consuming the house, they won the decision, and knocked out the fire with an estimated loss of $1500.00.

Investigation into the why's and wherefore's of the blaze in the midst of the flood disclosed that a stray mattress floating in the flooded basement of the house had been pushed against an electric light, said to have been inadvertently left burning, and had caught fire. The blaze quickly spread to the nearby exposed rafters of the basement.

Just why an electric light should be left burning in a basement of a flooded house—in fact, why there should be any electric current in any circuit at flood stage is a question that's not been answered. Nor has the parallel one of who discovered the fire, and turned in the alarm.

HORACE B. CLARK.

Government Denies Negligence

The Federal Government has denied negligence in the Texas City disaster in filing its answers to $198,000,000 in damage suits placed against it. Moving to dismiss the cases, the Government blamed two steamship companies, the railway firm, the longshoremen's union, a stevedoring firm and Texas City itself for negligence which led to the explosion.

Nine specific defenses were offered to the allegations of the individuals and firms which filed 251 suits against the Government. Named as negligent parties were the Republic of France, the Companie General Transatlantique, operators of the S.S. Grandcamp, one of the ships that exploded; Lykes Brothers Steamship Company, operators of the second exploded ship, the High Flyer; the railroad itself; the city of Texas City; a stevedoring company, and members of a longshoremen's union.

Acts of negligence, the Government said, included failure to observe no smoking regulations aboard the Grandcamp; failure to remove the High Flyer from the danger zone after fire was discovered aboard the Grandcamp; abandonment of the High Flyer; failure to maintain fire fighting equipment and personnel in the dock area, and failure to maintain a captain of the port.

New York's "Super" Rescue Unit Well Equipped

The new truck recently delivered by Mack Mfg. Corp., Fire Apparatus Division, to the New York Fire Department and now in service as Rescue I, Manhattan, is said to be the costliest, largest, and most completely equipped unit of its kind.

Space does not permit itemization of all specifications, but among the hundreds of equipment items are:

Radio: Powerful receiving and sending set (Link) with special table for operator.

P. A. System: Equipped with hand sets on long cords for remote operation.

Masks: Scott Air-Pak (6); Mine Safety Appliance All-Purpose (6) M.S.A Rubber Hoods (6).

Gas and Liquid Proof Suits (6).

Asbestos Suits (2); Blankets (2).

Inhalator, Clark Duplex (5); Carbogen cylinders (10).

Banco Portable Gasoline Hammer.

Smoke Ejector (Homelite) (2); Air hose, 40 feet.

Electric Generator (Homelite) 2500 watt; Flood lights: two 500 and one 250 watt; 3-reels each 100 feet.

Portable Electric Saw (Speedomatic) for wood and metal.

Portable Oxyacetylene Cutting Sets (2 Kerotest); One large K.G. Oxyacetylene Cutting Outfit.

Davis Safety Harness.

Foamite Generator and Hopper; eight 50 lb. cans powder.

G. I. Powder (10 cans).

M.S.A. Stokes Stretcher (1); Army Stretchers (2); Wool Blankets (12); Rubber Blankets (6); Wood Splints; Heat Pads (24).

Rubber Gloves: Acid protection (6 pairs); electricity (6 pairs).

Lights (Wheat, 7).

Fog Nozzles (Rockwood)

Chain Lift, Portable 1-ton.

Jacks: all types, to 20-ton.

Ladders: 16-foot extension.

Forcible Entry Equipment: Complete assortment of bars, axes (12) cutters, hooks (6), wrenches, bits, augers, punches, saws, bolt cutters, hammers.

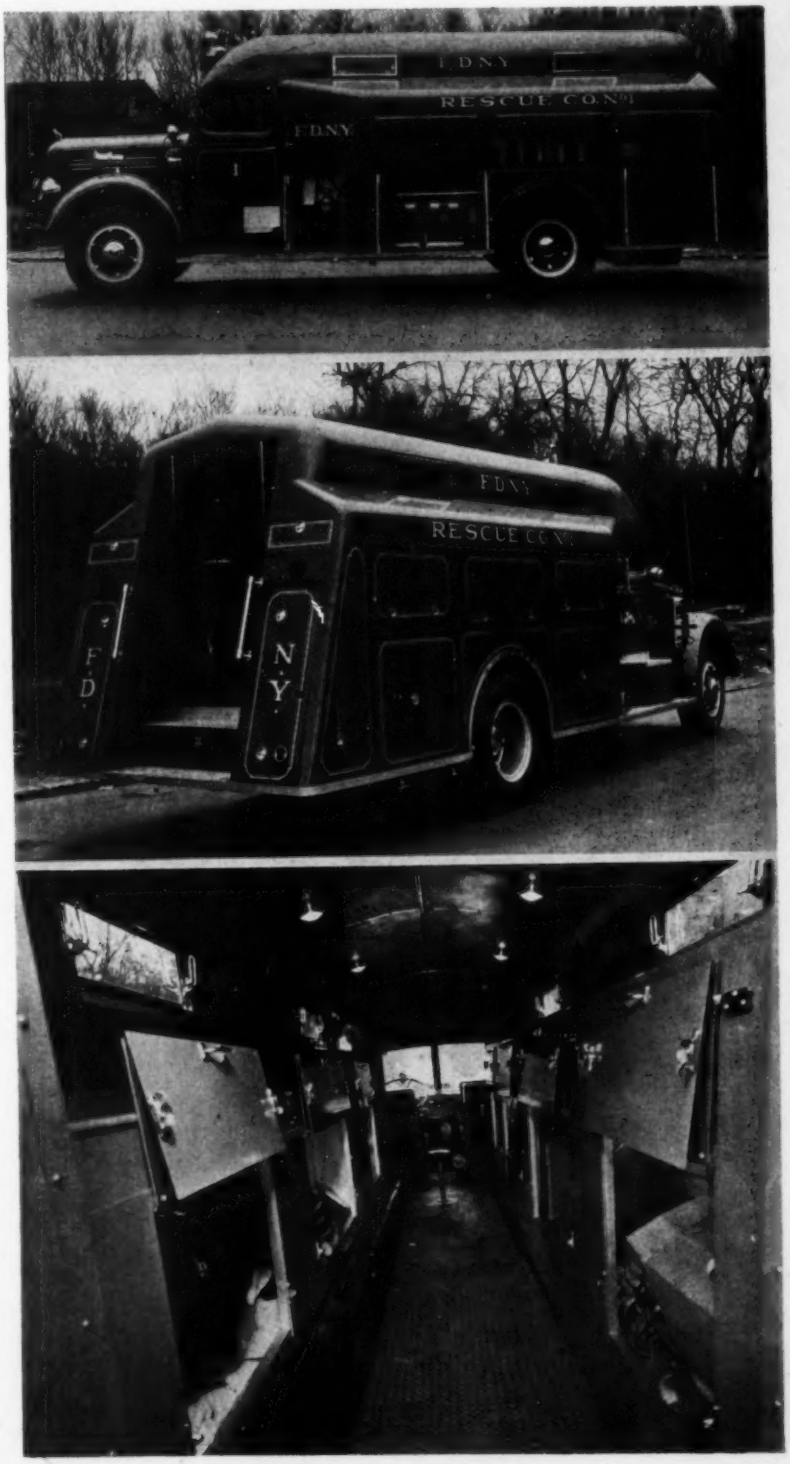
Sling Chairs and Towing Cables.

Rope: five 150-foot coils, ½ inch to ¾ inch; 3 F. D. standard roof ropes.

Extinguishers: one foam (2½ gal.); one standard S. & A. (2½ gal.); four 20 lb. carbon dioxide; one carbon tetrachloride (1 gal.); 2 carbon tetrachloride (1 qt.).

Blocks and tackle: complete assortment.

Miscellaneous equipment: Medical first aid supplies include 150 lbs. bicarbonate of soda.



New York City's New Rescue Truck

Short Cuts and Gadgets

TO AVOID ERRORS IN CALLING

In the past we've published a number of suggestions on how rural and township firemen can locate fires, and eliminate "going wrong" in responding. Now comes still another, from Contributor Raymond G. Lee, of Rochester, N. Y.

He writes: "I have heard of people in fire district zones who call the fire department in the neighboring zone due to improper knowledge of what fire district the fire actually is located in, and/or having no knowledge of that fire district's telephone number.

"In order to avoid errors in calling the correct fire companies, I would suggest that each fire district have printed on the reverse side of a penny postcard the proper directions for calling the fire department of their district and that they mail such cards to all residents of their fire districts, with the request that the card be posted near the telephone.

"Special care should be taken to see that all public phone booths in rail and bus depots, stores, taverns and other public places in their fire districts have one of these notice cards posted prominently within."

Fine, Brother Lee; now if you will only manage to eradicate the delayed telephone alarms caused by refusal of party-wire gossippers, to give priority to an emergency call, we'll thank you doubly!

* * *

NOTIFY THE FIRE DEPARTMENT

From John J. Gallagan, special officer of the Chicago, Milwaukee, St. Paul and Pacific Railroad comes an idea that should interest industrial safety engineers as well as fire chiefs.

Says Mr. Galligan, "For the benefit of good citizens who are trying to do their part when they see the start of a fire in their shop, office or home, all they think of in their excitement is to get a fire extinguisher into operation. This is excellent, but there is one big thing that they forget—the most important thing—which is to call the fire department.

"Signs on all fire fighting equipment throughout the country might impress on the minds of all our good citizens the need of immediately calling for help, thus changing a great many of our 2-2 and 3-3 alarms to still alarms.

"It has been my experience in fire fighting, before coming to the railroad, after a big fire you'll find one to three empty fire extinguishers lying around on the floor, indicating that they did a good job while they lasted." (Unfortunately, empty extinguishers can't tell how much time was wasted in the effort to use them before anyone thought to notify the fire department—Editor.)

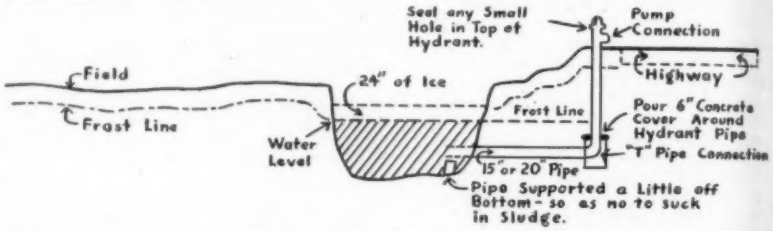
Continues Contributor Gallagan, "We now have them (signs) on all our fire cans, hose reels and extinguishers throughout our shops, storehouses, and offices in the Twin City Terminals of the Chicago, Milwaukee, St. Paul and Pacific Railroad, and they are doing a good job."

* * *

IMPROVED WATER HOLE FOR RURAL FIRE FIGHTING

More rural areas than ever are giving thought to the problem of water supplies for fire fighting. Among the sources of supply under consideration are water holes.

To plan and dig a suitable water hole isn't the simple thing some fire control officials believe. The most difficult obstacle to be overcome is freezing.


Seal any Small Hole in Top of Hydrant.
Pump Connection
Highway
Field
24" of Ice
Frost Line
Frost Line
Pour 6" Concrete Cover Around Hydrant Pipe
Water Level
"T" Pipe Connection
15" or 20" Pipe
Pipe Supported a Little off Bottom - so as no to suck in Sludge.

Just a Rough Idea How an Old Hydrant Could Be Put Back Into Service. No Inside Valve Is Needed in Hydrant. The Height of Hydrant Above Water-Level Not Over 15 Feet. Note: Perhaps the 15- or 20-Inch Pipe Should Continue on Up to the Surface; Then, a Concrete Cover Poured with an Air Vent. The Hydrant Pipe to Be Installed Inside of Larger Pipe and Extend to Below Water-Level

One of our good readers, Gordon H. Jameson of Saugus, Mass., who signs himself "an interested taxpayer," has been studying this question and comes up with a pretty comprehensive suggestion. Here it is in his own words:

"A friend of mine asked me what I thought of a water hole for fire protection. I replied that I thought it was a good idea. Last summer I drove out to his place in the western part of the state to have a look around. A spot next to the highway was picked out as a good location and a note made of it; other places, too, were looked over as possible sites for a water hole.

In the weeks that followed, I mulled over my friend's problem. The big question, as I saw it was, in the winter time, what good is a water hole with possibly two feet of ice on it? So I gave this detail consideration and came up with the answer which I have tried to cover in the accompanying sketch. I would be glad to hear from anyone else on this subject."

* * *

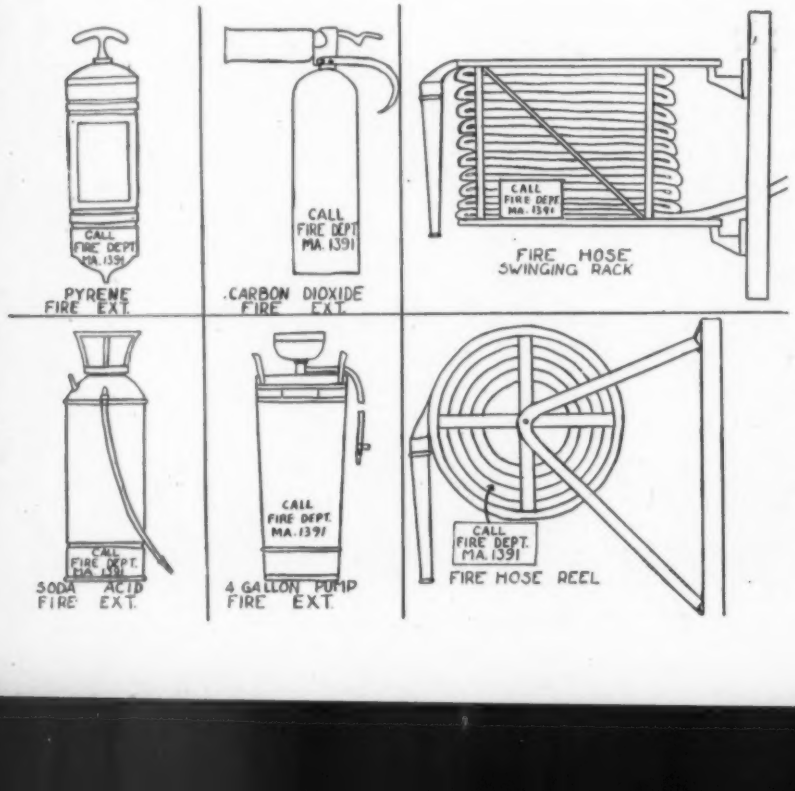
GET A "HAMMERLOCK" ON HOSE!

From Kay Moses of Baltimore, Md. comes a practical suggestion that may appeal to our readers. It has to do with uncoupling hose. He writes:

"I have found that, when breaking hose couplings at the rear of the engine or hose wagon, it is often convenient and helpful to place the knee on the hose just below the coupling, holding the hose between the knee and the rear step. Often a tight coupling can be opened this way, with just one spanner.

"I do not know whether this is considered to be good practice or not, but many men that I have shown it to never thought of it previously. It seems to work for me. In Baltimore we load our wagons with the female end on top, i.e., direct lay; so the knee holds the male end. How it would work with a

(*Continued on page* 415)


CALL FIRE DEPT MA. 1391
PYRENE FIRE EXT.
CALL FIRE DEPT MA. 1391
CARBON DIOXIDE FIRE EXT.
CALL FIRE DEPT MA. 1391
FIRE HOSE SWINGING RACK
CALL FIRE DEPT MA. 1391
SODA ACID FIRE EXT.
CALL FIRE DEPT. MA. 1391
4 GALLON PUMP FIRE EXT.
CALL FIRE DEPT. MA. 1391
FIRE HOSE REEL

The WATCH DESK

Overhauling the firemanic news of the day

by ROI B. WOOLLEY

Fire-Police Chief Has Dual Troubles

P. Booker is both Fire and Police Chief of the City of Altherimer, Arkansas. He also sports the "tin" of a Jefferson County Sheriff.

Fire-and-Police Chief — and Sheriff Booker recently arrested a farm laborer for drunkenness and lodged him in the local hoosegow, where his charge developed pyromanical tendencies, setting fire to his cell.

The one-man fire-and-police-chief, dropping his role as jailer, grabbed his fire hat and hustled to the scene with his firemen and apparatus.

Inconsiderately, while the "double-in-brass" chief and his willing workers were making short work of the fire, the prisoner took a short cut to freedom.

The fire out (and the unwilling 'guest',) the busy Chief chased his fugitive to the city limits, without nailing his man. There, the officer of many jobs quickly donned his Sheriff's credentials and overhauled the guilty one, to return him to the jailhouse—and a fireproof cell.

Thanks VICTOR BARTLEY

* * *

Firemen Fight 57th Floor Empire State Building Fire

An explosion and fire on the 57th floor of the Empire State Building, tallest structure in the world, April 5th, created considerable excitement in New York's mid-town area and gave firemen a brief but tough struggle.

The fire, of undetermined origin, started in offices of Ciba States Ltd., a chemical firm. Resultant explosion blew out all windows in the offices, showering glass as far as the opposite side of 34th street.

Elevator operators who heard the blast investigated and sounded a fire alarm, bringing the same first-alarm companies that fought the fatal airplane crash fire of 1946 in about the same part of the building.

Firemen extinguished the fire in ten minutes, but reported considerable damage to one office and slight loss to other seven rooms occupied by the chemical firm. There were no injuries. The building's elevator and other services functioned without hitch.

* * *

Fireboat Pilot a Rear Admiral!

From Captain Chris Hayes, Engine Company 13, San Francisco Fire Department, comes a real "Ripley" in the form of a news item which, believe it or not, says the pilot of San Francisco's Fireboat No. 1, George G. Harrison, is now a rear admiral in the United States Naval Reserve. Announcement of the promotion was made by the Twelfth Naval District, in May.

Captain Hayes writes: "You will please pardon me if I seem to blow my whistle so loudly, but when one contemplates that the San Francisco Fire Department has something that no other fire department in the entire world has —a Rear Admiral—one just cannot refrain from blowing his whistle."

Pilot (Admiral) Harrison, it is disclosed, is 55, a veteran of both world wars and an authority on matters pertaining to the marine division of the department. He served as lieutenant commander on auxiliary vessels in World War I and in World War II he was captured on Corregidor after commanding the last naval vessel to leave Bataan.

A loud salute for "Admiral" Harrison! We suppose that when the Fireboat 1 "rolls" (or "swims") Pilot, pardon us, Admiral Harrison, is piped aboard with all appropriate ceremonies!

* * *

Hot Off the Tape

Shannon Whitten served nearly a half-month as the first fire chief of Conway, Ark., before there was a fire to fight. Then his first alarm sent firemen to Whitten's own apartment house. Fire damage—$300 . . . In Matthews, Ind., high school students picketed Matthews High with signs demanding reinstatement of math' instructor Hobart Black who had been dismissed, school trustees said, because he frequently gave students the "hot foot" to wake them up. . . . In Holland, Mich., Simon Paauwe joined the fire department. First night it was his turn to sleep in the station they got a run. Un, huh—it was to his own home, which was badly damaged . . . Charles Newman, 26, of Keister, near Uniontown, Pa., was doing something with a can of kerosene when it flashed, igniting his clothing. He jumped into a cistern to extinguish flames and nearly drowned before members of family pulled him out, almost unconscious. Condition critical. . . . Students of Ludlow, Mass., high school who failed to make passing grades were blamed for burning all scholastic records in the office of school principal. Latter said, however, their office floor bonfire was fruitless because there are duplicate records available. A police lieutenant called a general assembly of all senior and junior high school boys and asked the guilty parties to "give themselves up." Nobody responded. . . . In New York City, Mrs. Mattie Mils, 47, went to a church bazaar with money her hubby had given her to try to win a ham. She won two bottles of wine instead, and drank same. That's the story she told the judge after being caught turning in a false fire alarm at 1:45 A.M. "You should a won a ham" said Magistrate Ringel,—"Thirty days!" . . . Near Millstadt, Ill., Joseph Hobelman's farm smokehouse went up in smoke and $5,000 in currency went with it. After the fire, firemen found ashes of currency in the tin box which Nobelman had secreted in an old stove in the smokehouse. The Brother's report of the fire read: Loss, building $300; contents $5,000 . . . (thanks J. K.) . . . The Pitman, N. J., Volunteer Fire Department waited 19 months for a new piece of apparatus—a 600 gal. booster truck. It arrived—but joy turned to dismay when it proved too big for the fire house. . . . Firemen of Bridgeport, near Saginaw, Mich., received "mutual aid" when they turned out in April to fight a spring grass fire. An unseasonable light snow fell for half an hour, dousing the blaze. . . . Page Ripley for this 'un: In Colton, N. Y., Claude Bulles, Chief of the local department, was boiling sap in his sugar house when he discovered the roof around a stove pipe was afire. Lacking water, he poured a pailful of sticky syrup on the flames. (Write your own pun.). . . . Ignoring warning shouts of firemen, Irwin Kieffer of Irvington, N. J., sped up an extension ladder to third story window of a burning multiple dwelling in Newark, N. J., to rescue a dog whose frightened barking got his attention as he was passing scene of two-alarm blaze. . . . In Ossining, N. Y., location of Sing Sing prison, two small children died after being overcome by smoke from a minor fire of undetermined origin in a davenport, despite efforts of firemen and hospital attendants to revive them. . . . Another for Ripley: In Beatrice, Neb., at 11 minutes past 11 o'clock of a Tuesday night, the Beatrice Fire Department made a run to 1111 North 11th street to put out a trash fire. Three more runs during the night boosted the month's fire calls to 11. (Thanks to many who sent this news item.)

* * *

Female Editor Now Fire Chief

Marie Clement is editor of the Oak Lawn, Ill., Independent. She's been editor of the paper for seven years. She operates it strictly by telephone because since she was two she's been crippled with infantile paralysis.

Oak Lawn, where Marie lives, is a skip'n a jump from Columbus Manor,

(*Continued on page* 415)

British Firemen Get the "New Look"

The "new look" has had its influence on firemen in Britain, if we are to believe the fashioners of firemen's raiment. The brave blaze and blitz fighters of the "Tight Little Isle" may lay aside their traditional uniforms for a "full fashioned" outfit, more like an airman's flying suit than a fireman's turnout.

Made from waterproof material and fastened up with one quick zip, it makes buttons unnecessary and is said to keep its wearer dry. A non-metal helmet will also replace the traditional brass helmet, for eons the hallmark of the British fireman.

The fireman on the left, in the picture, wears the pre-war British regalia; the center man sports the new zippered model and the chappy on the right wears the wartime version.

FALSE ALARMS

Expert

Screams for help coming from a house caused a passing pedestrian to rush in and offer his assistance. A distracted mother explained: "My son has just swallowed a quarter."

The stranger grabbed the child by the feet, shook him vigorously and the coin dropped out of the child's mouth. The relieved mother was profuse in her thanks.

"Doctor, how lucky it was that you happened by; you knew exactly how to get it out of him."

"But, madam," replied the stranger, "I'm not a doctor; I'm with the Income Tax Department."

Tom Cat

A lady checking over her grocery bill, found this item—"One tom cat—fifteen cents." Indignant, she called up her grocer and demanded an explanation. "Oh, that's all right, Mrs. Jones," explained the grocer, "that's an abbreviation for tomato catsup."

The waitress wondered why the elderly man was eating while his wife merely stared out the window.

"Aren't you hungry?" she asked the lady.

"Sure am, daughter," was the reply. "I'm jest a-waitin' till Paw gits through with the teeth."

Doing His Best

The young man who was throwing his life (and his money) away on strong drink received a call from his worried father. The father took the young man to the top of the hill overlooking Lexington, Kentucky.

"Look down there at those lights," said the father. "Those are distilleries. They are making whiskey . . . more than you can drink. Try to get that into your head."

The young man looked down into the valley, thought a minute, then replied: "Well, anyway, I've got 'em working nights."

A wife who uses good horse sense never becomes a nag.

Last night, when all the stars were lit,
Pa went out to stroll a bit.
When Pa came home, Ma had a fit;
The stars were out but Pa was lit.

Plumber: "I've come to fix the old tub in the kitchen."

Son: "Ma, here's the doctor to see the cook."

Movie Progress

As the two men left the movie, one was visibly more impressed with what they had just seen than the other.

"It's really wonderful," said the first, "what great progress the films have made within a few years, don't you think?"

"It certainly is," said the second, "first they moved, then they talked, and now this one smells."

"Would you like to see a model home?"

"Glad to. What time does she quit work?"

And the lead dog in a dog team is the only one that gets a change in scenery.

Archie: "I like mathematics when it isn't over my head."

Oswald: "That's just how I feel about seagulls."

"They tell me your wife is outspoken."

"By whom?"

He mumbled a few words in church; he was married.

He mumbled a few words in his sleep; he was divorced.

The boss thought his staff rather lazy and indifferent, so he pinned up the following notice: "Bread is the staff of life, but that is no reason why the life of our staff should be one continual loaf!"

"What is the difference between a college student and a bird fancier?"

"Spring it before I change my mind."

"A bird fancier loves his pets."

For Women Only

Out of a thousand men, there will be nine hundred and ninety-nine who will read this. The other one will be blind.

Parrot—The only creature gifted with the power of speech that is content to repeat just what it hears without trying to make a good story.

"Marry me, Richard! I'm only a garbage man's daughter, but—"

"That's all right, baby. You ain't to be sniffed at."

Although the modern girl's hair may look like a mop, it doesn't worry her much. Being a modern girl she doesn't know what a mop looks like.

Agent: "Sir, I have something here that will make you popular, make your life happier and bring you a host of friends."

Bill: "I'll take a quart."

Most auto accidents happen on Saturday and Sunday—proving it's a great life if you don't week-end.

About two centuries ago, many people who believed that much of man's illness was due to eating potatoes, organized the Society for the Prevention of Unwholesome Diet. Hence the word "spud" so commonly used today.

The teacher wrote on the blackboard: I didn't have no fun last night. Turning to the class she said: "How can I correct this?" Voice from the rear: "Get yourself a boy friend."

The wife of a well-to-do industrialist was in the act of instructing the new maid in her duties:

"Sometimes," said the mistress, "it will be necessary for you to help the butler upstairs."

"I understand, madam," replied the girl, "I drink a bit myself, sometimes."

"It's Under Control, J. B. Lucky This Seltzer Bottle Was Handy!"

READY TO SERVE IN

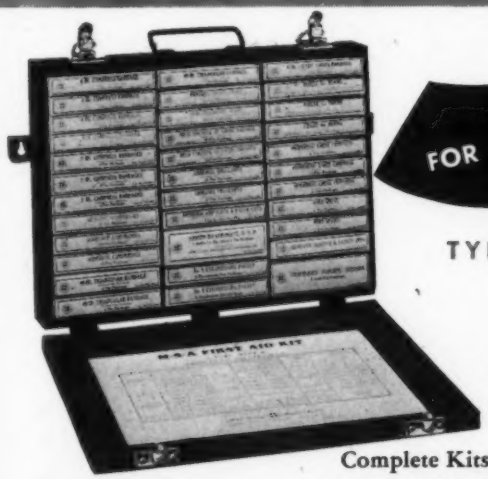
Emergencies!

FOR BURNS

M·S·A FOILLE BURN SPRAY KIT

When burns occur, use this Kit for instant, on-the-job treatment! Just attach a jar of FOILLE for Burns direct to the metal spray gun, and with a few rapid strokes you cover the injured area with a soothing, pain-relieving film of Foille. Sturdy steel All-Weather case contains spray gun, five jars of Foille, packaged sterile dressings, sterile muslin sheet, and other first aid items. *Ask for Bulletin FA-84!*

- FAST APPLICATION
- QUICK RELIEF OF PAIN
- FASTER HEALING
- BETTER RECOVERY



FOR INJURIES

M·S·A TYPE D FIRE DEPARTMENT FIRST AID KITS

- WEATHERPROOF
- DUSTPROOF
- COMPACT
- COMPLETE

Complete Kits, containing every needed first aid item—unit packaged, easy to get at, with each dressing or treatment ready for fast application to injury. All dressings sterile—all liquids hermetically sealed—All-Weather steel case has brackets for vehicle mounting. *Write for details!*

Kit cases finished in red crackle, with gold lettering.

MINE SAFETY APPLIANCES COMPANY

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World Wide Fire News

By Roi B. Woolley

First Course on A-Bomb Injuries

Sixteen physicians completed at the University of Chicago's Institute of Radiobiology and Biophysics the first extensive medical course in history designed to teach them how to understand, prevent and treat radiation injury, the serious hazard of atomic warfare.

The physicians represented the Army, the Air Forces and the United States Public Health Service. The course was organized by Dr. Raymond E. Zirkle, director of the institute, at the request of the Armed Forces Special Weapons Project.

The first half of the course covered the nature of atomic nucleus, properties and measurements of radiation and general radiobiology. The second half was devoted to prevention and treatment of radiation injuries to man and animals.

* * *

New Gas May Curb Plane Crash Deaths

In May it was reported by an aeronautical research committee that a new type aviation gasoline may be the answer to the death toll from fires resulting from aircraft crashes.

The sub-committe on aircraft fire prevention of the National Advisory Committee for aeronautics said a new safety fuel will be ready for its first tests as soon as mechanical and operating difficulties can be ironed out. According to Air Force figures, roughly half the people killed in airplane crashes survive the impact only to die from ensuing fires that break out and engulf the fuselage.

The new gasoline with the built-in safety factor is a "low volatility" fuel, researchers report. That means it vaporizes less than fuels now in use. According to press accounts, the low volatility fuel will not be apt to ignite in a crash, but if it should, the fire won't spread as rapidly as it does with present aviation gasoline.

* * *

Aftermaths of Brazil Blast

The number of dead in the explosion of April 15 last, at the Villa Militar ammunition depots near Rio de Janeiro, has been placed at between thirty-four and forty, with hundreds injured.

With the origin reported still a mystery, high military and police authorities believe that sabotage was committed. They have concluded that a time bomb was introduced through sewer pipes, to be exploded when a parade of 10,000 soldiers and 1,000 officers was taking place. Something miscarried and the explosion occurred fifty minutes later.

In April, over 100 persons were arrested in Brazil, as police continued search for instigators, believed to be communists. Two former deputies and two members of the staff of a Communist paper were among those arrested.

* * *

Hot Off the News Ticker

A fire at sea aboard the S.S. American Producer in May destroyed 116 sacks of parcel post mail bound for Americans in Europe. Details are lacking. . . . Some 125 firemen from Falmouth, Bourne, Middleboro, Plymouth, Carver and State Conservation Department, of Massachusetts, worked with firefighters from Bristol and Barnstable counties to control a raging brush fire, some of it on a part of Camp Edwards Army reservation, early in May. . . . The 35-man crew of the freighter S.S. Shell-Bar won a five-hour fight against a smouldering fire in the ship's hold. A Coast Guard cutter and other ships rushed to aid but were not needed. . . . In New Haven, Conn., a two-pound radio antenna weight fell from an unidentified airplane during a thunderstorm and crashed through the roof of a dwelling, missing the occupant, Mrs. Julia Gooley by inches. Five squad cars of police were rushed to the scene when frightened neighbors reported the city was being bombed . . . In May, the House passed a bill to give permanent status to the Civil Air Patrol as a volunteer auxiliary of the Air Force. . . . The Kiwanis Club, of St. Catherines, Ont., sponsored a drive to give a new $6,000 house to Reuben Flowers, who lost his two children when fire destroyed his house. All St. Catherines ganged up to help the homeless Negro family. . . . There was near-panic aboard the Union Castle Liner Good Hope Castle, when leopards, part of a cargo of animals for Glasgow, broke loose as the ship was steaming through the Gulf of Suez. The animals roamed the decks, and attacked other beasts, only being controlled by members of the ship's crew who used fire hose streams. . . . Near Nyack, N. Y., six villages were cut off of all electric service for two hours one night when an airplane crashed into the main power line at West Nyack. Neither pilot nor passenger in the two-seater was injured.

FYAWET

for WETTER WATER

If you need water with more "mileage" and more "stretch"—water that will put out a wood fire THREE TIMES FASTER than ordinary water—you will want FYAWET because it makes water more penetrating, quicker acting, faster spreading, more efficient as a fire extinguisher.

FYAWET has been used successfully on rubber . . baled cotton . . grass . . hay . . brush . . wood . . on the farm . . in the mill . . in the home.

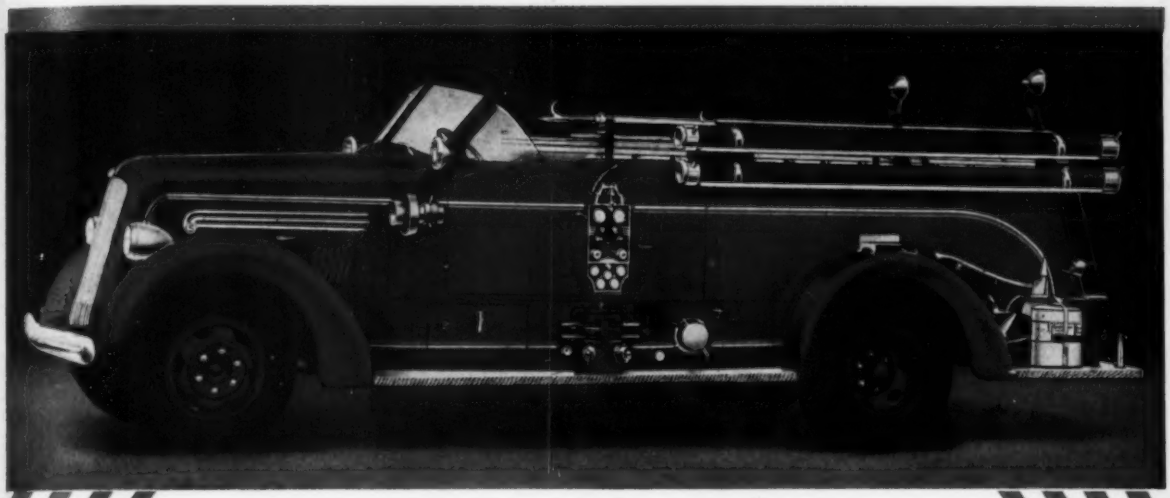
FYAWET has been laboratory tested and field tested for three years. It is now available for the first time to municipal, industrial and volunteer fire departments.

Write today for information on FYAWET; supplies are obtainable through leading fire equipment dealers.

ALROSE CHEMICAL CO.

PROVIDENCE 1, RHODE ISLAND

(FYAWET distributor agencies in many territories still available)



D-E-P-E-N-D-A-B-L-E is also spelled S-E-A-G-R-A-V-E

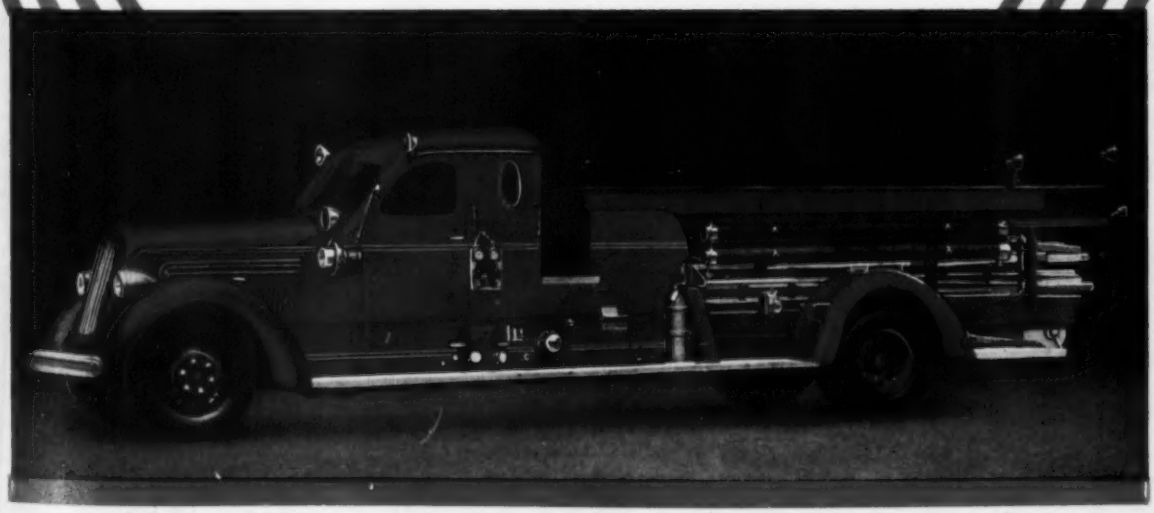
Fire Apparatus must be of different construction than a truck or an automobile. It must not only be able to give dependable transportation to and from a fire but it must also stand up under grueling hours of pumping and service under all kinds of conditions.

Fire Apparatus has to be tough. . . . It has to be especially built. That is why Seagrave designs and builds its own motors, frames, bodies, pumps, ladders and other important parts. Seagrave Apparatus is made for fire service and for no other purpose. This has always been the policy of the Seagrave Corporation. Its success has been demonstrated by the thousands of pieces of Seagrave Apparatus throughout the world which year after year do the job, do it right and are free from trouble.

THE SEAGRAVE CORPORATION, Columbus, Ohio
Bickle-Seagrave, Ltd., Woodstock, Ont.

Seagrave

THE GREATEST NAME IN FIRE APPARATUS



HALE FZZ Supplying Water Through 650 ft. of 1½" Hose to Large Pumper . . .

Units Perform Remarkable Job for 12 Hour Stretch Without Faltering

ROSEMOUNT FIRE DEPARTMENT

ROUTE NO. 2 — PHONE 2220

PORTSMOUTH, OHIO

April 3, 1945

Hale Fire Pump Company

Conshohocken, Pa.

Gentlemen:

The enclosed clippings and photographs show two of your small portable pumps in action, supplying six hundred and fifty (650) feet of 1½" hose to our large pumper which in turn fed 600 feet of 2½" hose to the fire. We made this spectacular lay after having used up the cistern supply on the farm. The little pumps performed a marvelous job, running almost continuously for a twelve hour stretch, never once faltering.

Our department is one comprised of volunteers and has only one of the pumps pictured; the other belongs to a department located in another section of the township, who we had to call upon for help. When we first made the hook-up with only one line it would supply the water but could not maintain pressure at the nozzle until the other department arrived and we made the second lay, from that time on we really had the proper amount of nozzle pressure to do the job. Had our department had two portables at the beginning we could have put out the smoldering fire much sooner.

This small portable is the only answer for rural volunteer fire departments who have no plug supply of water to depend upon. Hoping the enclosed material will be of value to your firm in an advertising manner.

Please place our department on your mailing list of catalogs on fire-fighting equipment as we like to be kept up-to-date on the latest types of such equipment.

Yours very truly,

William J. Doyle

William J. Doyle
Historian

Write today for FZZ Folder to:

HALE FIRE PUMP COMPANY

Conshohocken, Pa.

. . . A four-engined DC-6 with forty-eight persons aboard made a forced landing at Cleveland with one of its engines on fire. No one was injured. . . . The old battlewagon Mississippi, now serving as an auxiliary gunboat is used to try out new type equipment, including waterproof, fireproof and sinkproof mattresses that can be used as rafts. Somebody better tell the hotels about 'em! . . . The Val Morin ski lodge near Quebec was destroyed by fire following a furnace blast with estimated loss of $100,000. About fifty week-end skiers were driven into the cold in their nighties. . . . Crewmen of a British airliner which arrived in Lisbon from London said their ship was hit by a ball of fire in the air. They said they saw the flaming sphere hurtling toward them in the midst of a storm and that it bounced off the nose of the plane, cut a hole in the rudder, shaking the ship. The passengers didn't see the ball but felt the impact. . . . A man sent the Blackpool, England, fire brigade a postcard saying: "Will you come to my house? I can smell burning." The firemen got it twenty-four hours after mailing. They thought it was a joke, but responded anyway, to find timbers smouldering under the man's hearth. Write your own caption.

* * *

Death from the Skies

Three men were killed and a fourth injured critically in May when two light planes collided in mid-air over the eastern part of Detroit, Mich.

In the crash, which occurred about 900 feet in the air, the tail assembly of one craft was torn free. The body of one of the dead was thrown from his plane by the impact and fell through the roof and floor of the front porch of a house. The second plane fell into the back yard and burned. Firemen prevented serious extension of the flames.

Police said the planes had taken off from City Airport just before the crash.

Clinton County Organizes

Clinton County, New York's most northern county, extending to the Canadian Border, now has its own Firemen's Association, fathered by Levi L. Todriff, Chief of the Chazy, N. Y., Fire Department.

With the exception of the City of Plattsburg, all fire protection in the County is provided by volunteers. It was because of this fact and in response to the need for a workable mutual aid system and other improvements in the fire service, that the new association was formed, the Constitution being adopted on May 10, 1948.

The Association's first convention and annual meeting will be held July 18, 1948 in Dannemora, N. Y., the Walter M. Thayer Hose Company of that village serving as host.

Melvin W. Titus, Chief Fire Inspector of Clinton Prison and secretary of the Dannemora Fire Department, was named convention chairman. The program will include the annual meeting; parade of fire companies and bands, American Legion Posts, officers from Clinton Prison, attendants from Dannemora State Hospital, Boy and Girl Scout Troops, Ladies Auxiliaries; various firemanship demonstrations, water fight, games, dancing, etc.

MELVIN W. TITUS.

EXTINGUISHES OR CONTROLS FIRES IN BOTH ORDINARY COMBUSTIBLES AND FLAMMABLE LIQUIDS . . . .

Order your new Rockwood LIGHTweight WaterFOG Nozzles now and be equipped with the most advanced fire fighting Nozzles available to municipal fire departments, industrial plants, oil refineries, etc.

Half the weight of the former all-purpose nozzle, the new LIGHTweight special aluminum-alloy type SG-48 WaterFOG Nozzle will provide your firemen, when fighting fires, with three types of discharge — 1. High Velocity WaterFOG, 2. Straight stream or 3. Low Velocity WaterFOG from new LIGHTweight Extension Applicator.

Rockwood engineers have designed the new SG-48 Nozzle with these 3 types of discharge to permit your firemen to reach the very root of the fire and to attack it with less physical punishment.

Improve your fire fighting methods now by installing on all your hose lines a new Rockwood LIGHTweight triple-action type SG-48 WaterFOG Nozzle.

Rockwood WaterFOG is also available in the form of fixed piping systems and are today protecting many types of equipment, processes and structures, transformers, paint shops, quench tanks, engine test cells, etc.

For more complete descriptive information, write for circular C-301R.

ROCKWOOD

ROCKWOOD SPRINKLER COMPANY

54 HARLOW STREET WORCESTER 5, MASSACHUSETTS

Specialists in Fire Protection Engineering, Equipment and Installation since 1907

SUPPLE, SMOOTH

... that's Eureka "Streamlined" Fire Hose. *Supple* because of Balanced Weave that makes a fabric of correctly twisted cords under uniform tension. *Smooth* because of the unique Interior Filler Ply, which provides a smooth waterway, avoids "washboarding", assures maximum pressure at the nozzle.

Eureka Oxygen Bomb Test scientifically proves the aging qualities of the hose lining, makes sure it will remain smooth and uncracked. Effective prevention of all known forms of mildew is provided by Eureka's exclusive "Formula X."

EASY TO HANDLE... Eureka will not buck or "run amuck." The Balanced Weaving and patented Controlled Curing eliminate excessive writhing, permit easier handling on ladders, on the ground, or when loading in the wagon.

"For greater protection to life and property"

EUREKA FIRE HOSE

Division of United States Rubber Company

195 HUDSON STREET • NEW YORK 13, N. Y.

G. I. Bill

(*Continued from page* 382)

ing in schools and colleges, and 546,000 training on-the-job on December 1, 1947.

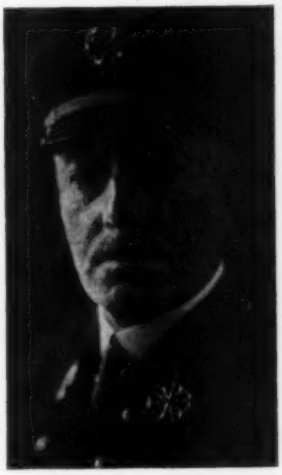
Veterans are eligible for education and training under the Servicemen's Readjustment Act (G.I. Bill) if they served in the armed forces between September 16, 1940, and July 25, 1947; had 90 days or more of service; and were released under conditions other than dishonorable.

The 90-day minimum service requirement is waived in the case of veterans released because of service-connected disabilities.

New England Association Convention Program

The 26th Annual Conference of the New England Association of Fire Chiefs, to be held June 21 to 24 inclusive at the Wentworth, Portsmouth, N. H., is an ambitious one.

Monday, June 21 is given over to registration, the Conference opening Tuesday with an address by President Arthur W. Spring; invocation by Rev.



Chief Arthur W. Spring

Michael F. Collings; addresses of welcome by Mayor Cecil M. Neal, Portsmouth; Edward C. Peterson, Chief Manager of the city; Chief Oscar B. Berquist, Berlin, N. H., president New Hampshire Fire Chiefs' Club and Chief George T. Cogan, Portsmouth, N. H. Response to the welcomes will be delivered by Chief Albert W. Kimball, Hingham Fire Department. There will be a memorial address and the benediction by Rev. John P. Fitzsimmons, Plymouth Congregational Church, Belmont, Mass.

Tuesday afternoon, the business sessions includes addresses by Chief John E. Holden, Newington, on "Forest Fire Conditions As I Saw Them in Maine and New Hampshire"; Chief Ralph G. Seavey, Rochester, N. H., on "Emergency Fire Conditions at Rochester"; Raymond J. Kenney, Mass. State Forester, "Forest Fire Conditions in Massachusetts During the October Emergency and its Solution"; Chief Oliver T. Sanborn, Portland, Me., "My Experiences

(*Continued on page* 416)

MIDWESTERN
Protective Clothing

for Men of Action!

Here's Protection and Comfort in Your Hazardous Work of Safeguarding Life and Property Against FIRE!

Modern fire fighting calls for ***specialized*** protective clothing . . . clothing that safeguards the fireman's life on every run . . . clothing that enables him to use his equipment to the fullest advantage.

Every Midwestern product combines the thoughts and suggestions of practical Fire Chiefs and firemen from every section of the country . . . and every purchaser profits from years of Midwestern research and experience. That is why the famous Mackinaw Coat and other Midwestern clothing have embodied in their design every feature necessary for the protection and comfort of firemen.

In our vast selection of crude rubber materials you will find a type of fabric suitable for your climate and needs. The softness and flexibility in the high-grade materials used are your assurance of long time service and comfort. Many Fire Chiefs are now including Midwestern clothing in their regular yearly budget and, by placing your order early, you can be assured of this adequate protection when needed.

For complete information, have your Midwestern dealer show you our new garments now manufactured from crude rubber compounds. A letter to the factory will also bring you material samples for your inspection.

We now have available: White, Ivory and Brown crude rubber coats for Chiefs, Assistants and other officers; also all sizes short and ¾ length felt lined Firemen's boots for immediate shipment.

NONE GENUINE WITHOUT THIS TRADE MARK

MIDWESTERN MFG. CO., Mackinaw, Illinois

Manufacturers of the Famous **MACKINAW Coats**

BOOKS
For Every Fire Fighter

FIRE CHIEF'S HANDBOOK

For progressive fire chiefs interested in up-to-date fire-fighting methods, the "Fire Chief's Handbook" will be a mighty valuable reference guide. It gives to ambitious fire department officers and men, in plain, understandable form, information that should prove extremely helpful in preparing for promotional examinations.

It is a book every fireman needs and ought to have. **Price $4.00 Postpaid**

FIRE SERVICE HYDRAULICS

Brings thoroughly up-to-date the subject of hydraulics as it pertains to every phase of fire-fighting — in simpler, more understandable and more complete form than ever. Not only that, it embraces, as well, many important new angles that have never before been covered anywhere.

"Fire Service Hydraulics" is a book every progressive fire fighter from the Chief down needs and should have.

Price $3.00 Postpaid

PROMOTIONAL STUDY COURSE FOR FIREMEN

To fire chiefs and other officials responsible for preparing examinations, this book will be found most helpful. And it is a mighty good reason, too, why fire officers and men should find it of inestimable value in studying for advancement. Covers in 48 chapter lessons most of the important phases of fire protection promotional study — mainly in questions and answers form. **Price $3.00 Postpaid**

QUESTIONS and ANSWERS FOR LIEUTENANT and CAPTAIN

Includes chapters on Report Writing How to Answer Examination Questions, Chemistry Examination Questions, Fire-Fighting Questions, Overhauling, Ventilation, Fire Prevention, Inspection, Evolutions, Drills, Use of Apparatus, Rescue Work, and in fact all the topics covered by the fire department promotional examinations.

Price $2.50 Postpaid

CASE-SHEPPERD-MANN PUBLISHING CORP.
24 West 40th St., New York 18, N. Y.

For Practical Discussion of Current Fire Department and Fire Management Problems

THE USE OF SERVICE INSIGNIA ON FIREMEN'S UNIFORMS

THIS month's Round Table discusses the debatable question of whether or not service stripes, or other insignia, should be worn on uniforms to denote length of service in the department.

From the opinions received, it is plain that there is no unanimity of thought. Furthermore, the replies show a number of departments that once followed the idea, but have since dropped it, just as they include the willingness of many fire chiefs to institute the practice, if it is desired by their departments.

In general, the affirmatives cite these advantages: 1. It gives the individual credit for his length of service, not only in the eyes of the department but in the opinion of the public. 2. It improves the uniform, makes it more distinctive and takes it out of the commonplace. 3. It builds morale; helps the fireman take pride in his appearance. 4. It commands respect both in the department, and in the eyes of the public and it is a token of appreciation.

Those opposed to the practice offer these objections: 1. When promotion is by examination and merit, it is embarrassing to show long service without rank or other indication of efficiency. 2. It adds to the cost, at a time when firemen already have to pay out too much for uniforms. 3. Uniforms are already "overloaded" with insignia. No practical advantage in the idea. 4. It diminishes neatness of uniform, detracts from the trim appearance of the personnel. 5. It makes younger members conscious of their lack of service and tends to create disharmony in the ranks. 6. It serves to make a man rest on his service record.

More departments evidently do not permit use of service stripes than do so. Stripes indicating rank in the field of officership are more common than those connoting service. Many departments also permit the wearing of insignia indicating citations or awards for bravery and other merit, and some relate these to service insignia.

There is some difference also among those who favor the idea of service insignia. Some prefer stripes; others pins (stars, maltese crosses, etc.). Some wear them on one sleeve of the uniform, some on the other, and some locate them elsewhere.

Readers are invited to send in their comments on this subject, or on next month's subject, which is described in a box on a following page. Address communications to Round Table Editor, 24 West 40th Street, New York 18, N. Y.

HERE IS THE QUESTION

1. **Do you believe the use of service stripes, or bands, on firemen's uniforms, to indicate their period of service in the department, would be a desirable plan?**
2. **In which ways, in your opinion, would they prove of benefit to the department or its personnel?**
3. **Do your men already wear them?**

Discussion of the Topic

J. C. Sievert, Chief, Tucson, Ariz.: We are of the opinion that stripes or bands can better be used on firemen's uniforms to indicate rank rather than length of service, and use stars to indicate length of service.

We feel that service insignia is a high morale builder to the men in the service, and inspires confidence in the public when they see their firemen wearing insignia which indicates years of service.

Our service insignia now in effect is one star for each five years of completed service. The more stars on a man's sleeve the more dignity he acquires in the eyes of the public, as has been evidenced by public comment in our town.

Carl E. Swanson, Chief, Sioux Falls, S. D.: I do not believe the use of service stripes would necessarily improve the efficiency of the department. However, it would point out to the general public the older members of the department.

In this department, we use safety firemen's coats and have them distinguished by use of stripes. That is, the chief and assistant chief wear white coats, and the captains, at

present, black coats with white stripes. This is most beneficial at a fire to locate the particular officer sought for. If all the men were dressed alike, the problem would be more complicated and much time would be lost in locating the one desired.

Abel S. Eldridge, Chief, Newport, R. I.: I do not believe in the use of service stripes or bands. I see no practical purpose in adding them to the firemen's uniforms. In many cities where firemen must furnish all their uniforms, it would prove an additional burden, especially in these times when wages are totally inadequate.

Also, it is becoming increasingly evident that the real military units are now avoiding the use of excessive uniform decorations.

R. C. McRonald, Chief, London, Ont.: If promotion was by seniority alone, I would be in favor of using service stripes, or bands, on firemen's uniforms, to indicate their period of service. But where promotion is by examination of efficiency plus seniority, it is rather embarrassing for those who cannot make it, to have to display their length of service without some braid.

Ira D. Leech, Chief, Decatur, Ill.: The use of service stripes or bands on firemen's uniforms has value in respect to showing the service or rank of the person wearing the uniform. However, in the past we have experienced difficulty in getting stripes for regular firemen and stars for the officers, each denoting five years of service, due to shortage of material. Also when a man is promoted, he usually tries to sell his uniform to a newer man and we find it difficult to get the marks left by the stripes or stars off the material. When we first adopted this plan, there was a difference of opinion as to the type and size of stripes to be used. A stripe which is too large may detract from the appearance of the uniform. We also experienced a fading of the material that the stripes or stars were made of. My personal preference would be a stripe or bar about two inches long and one-half inch wide.

Olaf Sorenson, Chief, Superior, Wis.: I believe that a visual mark for the years of service is a good morale builder. But I also feel that the stripes alone are not enough. They should be the proud reminder of service rendered.

With stripes for each ten-year period of service, there should also go some practical reward for over twenty years, possibly an additional service monthly financial gain, or an extra week of vacation—something that will be appreciated by the man who has served. It must be demonstrated that the department holds this service in high regard and some fitting tribute should be given the man when his stripes are presented.

We are past the age when just a stripe on a coat will mean too much, but if it is given with proper appreciation, it will be a mark of distinction that can be proudly worn, knowing you have served and been appreciated for that service.

If properly handled with simple, sincere significance, it can be one of those small tokens strewn along your life's work to show appreciation of good service.

We do not use any mark for service, but if it is to be of value, it should

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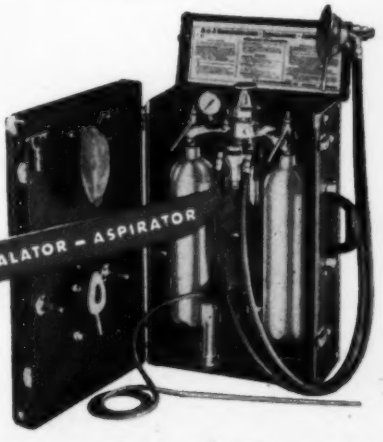

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"THERE CAN BE NO COMPROMISE WITH QUALITY WHEN A LIFE IS AT STAKE"

be an obligation on the national level. There is at present no uniform standard for firemen. The uniforms in some cities are decorated with more buttons and braid than a brass band, and others are so simple and unappealing that you cannot differentiate between them and those used in other cities. A uniform adapted as a national symbol of our fire service should be used so that wherever you might be, you could not mistake a fireman in uniform, nor the recognition marks on it of either rank or length of service.

J. W. Smyth, Chief, Springfield, Mo.: I do not believe the use of service stripes, or bands, on firemen's uniforms to indicate their period of service in the department would be a desirable plan.

The only thing our men wear on their uniforms is the Red Cross insignia showing they have passed their first aid course.

Lester R. Schick, Chief, Davenport, Ia.: I am personally opposed to the use of service stripes. I feel there is a tendency to overload the uniforms at times. A good indication of that was the service uniforms during wartime. By the time a man had his medals, ribbons, unit insignia, overseas stripes and service stripes on, he looked like a walking billboard. I would much rather see the use of a small pin designating 5, 10, 15 years, etc., service.

G. F. Nalley, Chief, Little Rock, Ark.: I believe that service stripes or bands should be worn to indicate service. I think it would be a good thing if the city would give these to the men for five-year periods, with additional pay for each stripe. It would give a man something to work for.

Some of the men in this department wear service stripes.

B. H. Brown, Chief, Macon, Ga.: The use of service stripes is just a matter of personal opinion. They would prove of benefit to a department that desires this sign of distinction as to their time in service.

We do not wear any in this department, although I would let the men wear service stripes if they so desired.

L. L. Petrey, Chief, Mobile, Ala.: The members of this department wear a small service star on their coat sleeve, each star representing five years' service.

The members of this department with over five years' service are very proud of their service stars.

E. P. Feaster, Chief, Lincoln, Neb.: I can see no advantages to be gained in the use of service stripes or bands in connection with the firemen's uniform, as all officers in most fire departments wear badges to distinguish their rank. In my opinion a group of firemen in uniform without colored bands or stars on sleeves, makes the finest looking uniformed group of any. In my opinion these added decorations instead of adding to the appearance of this group would diminish their neat appearance. Furthermore, I think it would be embarrassing to a man with long seniority to advertise the fact that with the amount of time indicated by this means that he had not received a promotion in his regular turn, as most fire departments do not use seniority as a basis for promotion.

Our department does not wear service bands or stripes, as the indication of their years of service. All offi-

HERE IS THE QUESTION FOR THE NEXT ISSUE

1. **Do members of your department wear other than their regulation uniform when on house watch duty. If so, what does the uniform consist of (is there any special insignia worn only by the man on watch)?**
2. **Do members of the department furnish their own uniforms, or does the department supply them?**

cers have velvet collars on coats, velvet bands on caps, badge and braid to signify their title.

Arthur T. Dillon, Chief, Joliet, Ill.: I am greatly in favor of stripes and bands on uniforms as I feel they tend to do the following: 1. Denote length of service for the individual; 2. Add distinction to the uniform; 3. Are a morale factor, and 4. Command respect throughout the ranks.

We don't wear stripes or bands in our department as yet, but our Police Department has followed the above policy for a number of years.

George Schlotterbeck, Chief, Hamilton, Ohio: I personally think the use of service stripes on a fireman's uniform is a very desirable plan. It distinguishes the veterans from the rookies and also gives to the older men a sense of pride in their appearance. Our department has used service stripes on the sleeve for the last four years. One stripe is used for each five years of service.

Carl A. Smith, Chief, Troy, N. Y.: We discontinued service stripes on uniforms in 1938, as we believe the uniform looks much neater without them.

Ray H. Earle, Chief, Massillon, Ohio: I believe that service stripes are a necessary item in fire department circles.

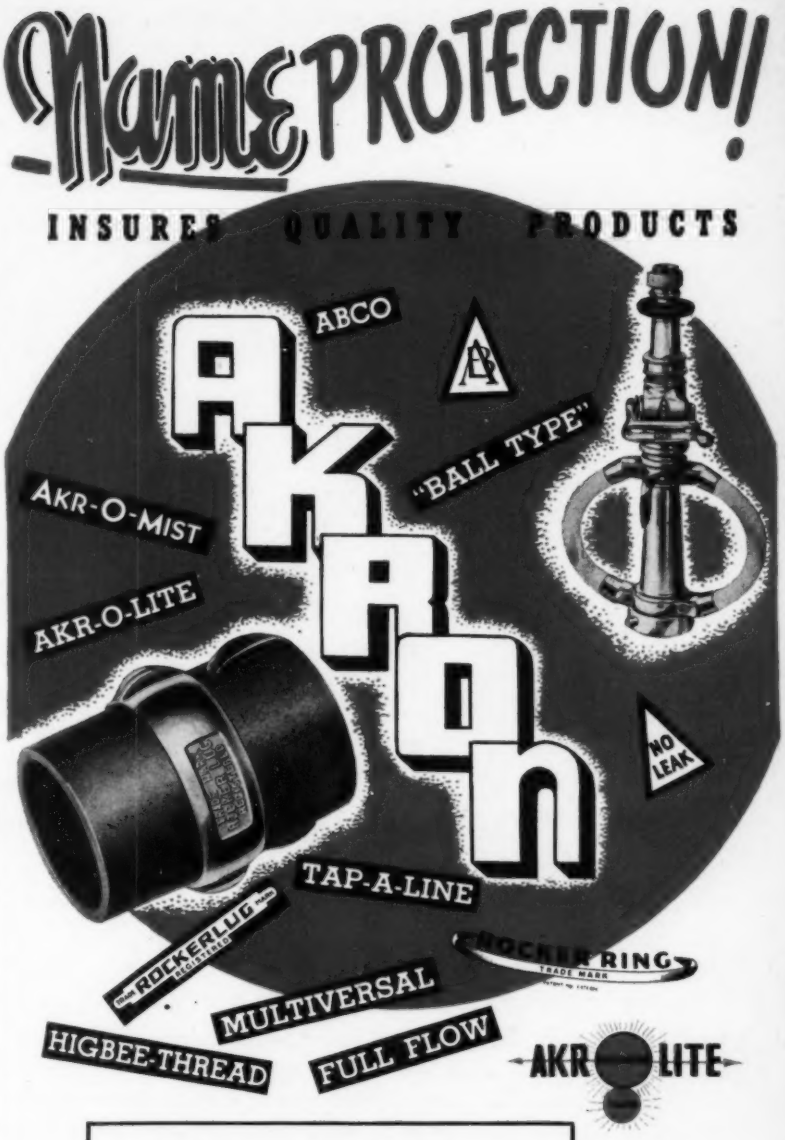
In many departments not enough credit is given the man who served faithfully for years in protecting the community from fire.

With these stripes on uniforms, the public would be cognizant of a fireman's service and the fact that the administration recognizes his service. It would uphold the morale of the older man and would help curb the feeling in younger men to criticize the older men.

We use stripes here only on officers' uniforms, but I hope to extend the practice to all personnel.

D. L. Cliatt, Chief, Augusta, Ga.: I believe that use of service stripes, stars, bands, etc., is purely a matter of personal opinion and serves no purpose nor is of benefit to the men or the department. We do use the service star—silver or blue for one year, gold star for five years.

Edward Gall, Sr., Chief, Mount Vernon, N. Y.: I do not think the use of stripes or service bands on uniforms, including length of service, would be of any benefit to the department or its personnel. The members of this department do not wear them.



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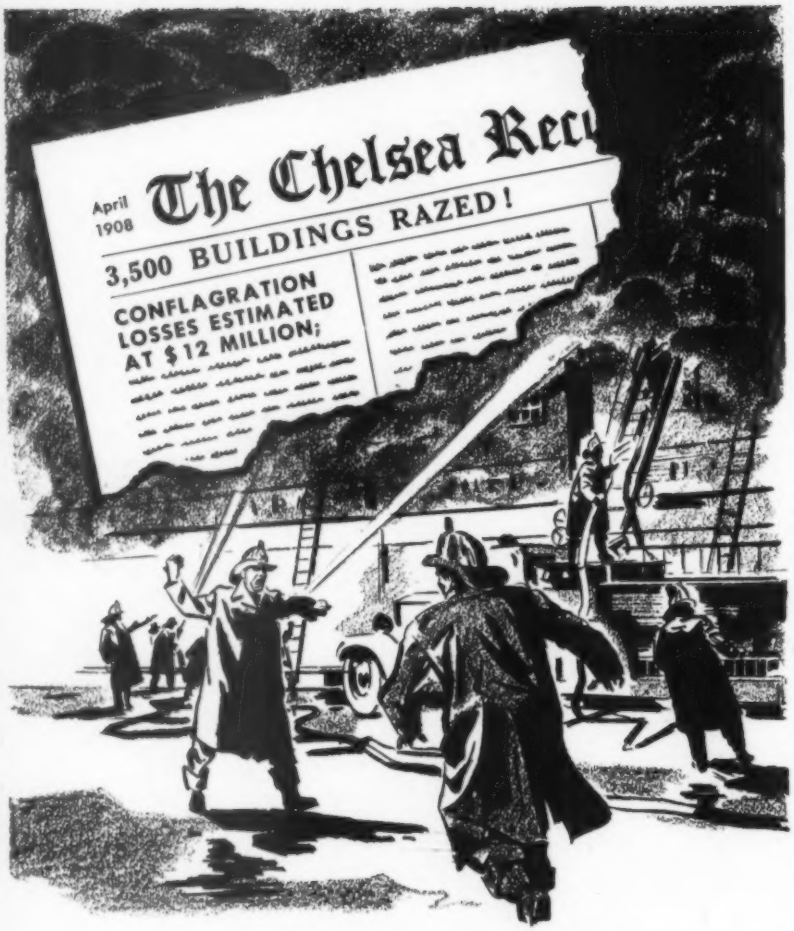

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ORIGIN: a back yard rubbish pile. SPREAD: to a 3-story frame building full of rags. NEXT: to a wax shop. THEN: two more 3-story "rag" buildings. WIND: 40 m.p.h. RESULT: burned an area 1½ miles long, ½ mile wide.

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If anything, it would more or less make the younger members conscious of their length of service. They all have heard the older members asked "When are you going to retire?" or "Why don't you retire?" The wearing of any number of these stripes could cause the questions to become embarrassing.

It is my opinion that the personnel will benefit more by eliminating the wearing of the uniform when possible than to add anything more to it. We are working on such a plan in this department.

T. G. Lennon, Chief, Saskatoon, Sask.: I do not believe in service stripes for any uniformed department. They have a tendency to creat disharmony in the ranks, especially to a long service man who has been passed up on a promotion.

As our system of promotion is based on seniority, with efficiency, and we emphasize efficiency, we have stayed away from any marks of service shown on a uniform.

In my opinion, service stripes are of no benefit either to the department or to its personnel. They seem to make a man rest on his service record, and gives him an air of superiority over his fellow firemen.

In most cases, a fireman, once he feels he has a few years in the department to his credit, seems to take it for granted that he is a privileged employee, and his days of training and learning are over, and thereby neglects to prepare himself for his eventual promotion. Then, if he is passed up, he resents a junior man being his superior.

W. G. Middleman, Chief, Burlington, Ia.: With regard to wearing service stripes, I believe it to be a part of the job as it gives the fireman the distinction of having served his citizens well during his service years.

It indicates to the man on the street that the fireman is interested in his job and is making it his lifelong profession.

In our department a bar indicates five years and a star indicates ten years of service.

Charles B. Kuhl, Chief, Sioux City, Ia.: I don't believe service stripes on firemen's uniforms would be desirable. The fireman of today is not in uniform except on inspections, funerals, or parades. Stripes would add to the cost of the uniforms. Our department does not wear them.

David F. Glines, Chief, South Gate, Cal.: In answer to your questions, I will quote from our uniform regulations: "Maltese Cross service crosses in silver shall be worn by all ranks except chief officers who shall wear gold. Service crosses shall be worn on the left sleeve (of the coat) approximately one inch above the rank stripe. One Maltese Cross is authorized for each five years of completed service. Military leave shall count the same as fire service, providing the member shall have been a member of the fire service prior to his military leave."

In our opinion, the wearing of service crosses serves to distinguish the older men from the recruits in the eyes of the public. Most men wear them with pride.

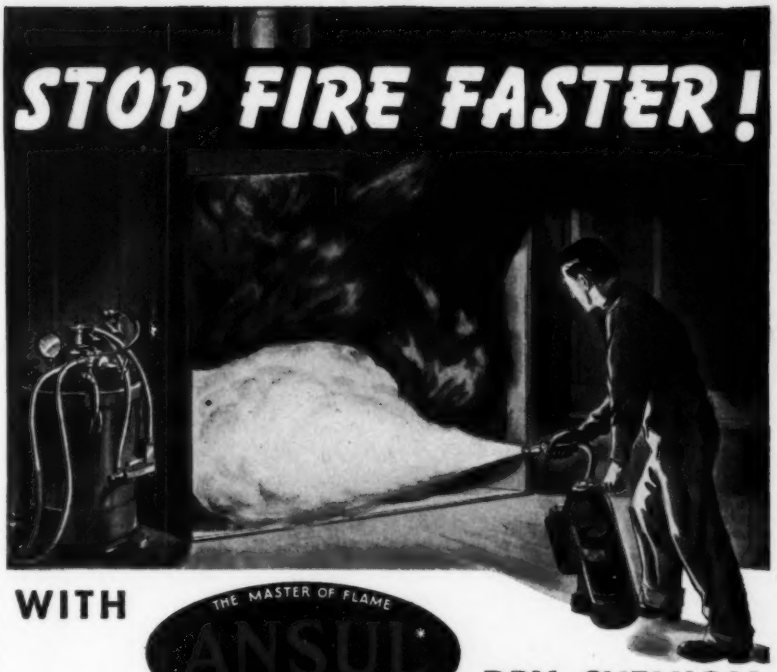
They are a decided factor in building morale and serve to distinguish men for service rendered.

What's Burning

THE following list includes fires of $10,000 loss and over in the United States and Canada for the month of May 1948.

Month Ending May 31, 1948

Omaha, Neb.—Bldg. occupied by Tire Supply Co. damaged.
Longview, Wash.—Carney-Pacific Rockwool Mfg. Co. damaged. Gas explosion.
Springfield, Ore.—C. W. Guerrier Lumber Mill destroyed.
West Memphis, Ark.—Soy bean processing plt. of Arkansas Mills, Inc. severely damaged.
Cameron, Tex.—Milam Theatre, Reno Bldg., Palace of Sweets, office of Dr. S. R. Cotton, Knights of Pythias Hall, Sharpe Jewelry store and Western Auto Store damaged.
Spokane, Wash.—Whse. and sales office of Washington Brick & Lime plt., near Dishman, damaged.
Norwich, N. Y.—Summer home, Chanango Lake, owned by Melvin C. Eaton, destroyed.
Syracuse, N. Y.—Apt. house and two other bldgs. damaged. Trash fire in basket.
Tazewell, Tenn.—Runions Cedar Shop, cedar chests and furnishings mfrs., destroyed.
Bristol, N. B.—Dept. store damaged.
Bonaire, Ga.—Bonaire High School, destroyed.
Chicago, Ill.—Office bldg., loading equip. and coal piles of Hafner Coal Co. damaged.
LaCrosse, Wis.—LaCrosse Auto Supply Co. destroyed.
Glen Burnie, Md.—Two-story bldg. occupied by Gas Oil Products Co., County Chronicle, Glen Burnie Recreation Bowling Center, Lipin Hardware Store, Bur Mon Bar, destroyed. Escaping gas.
Selah, Wash.—Ross Packing Co. plt. destroyed.
Ste. Agathe, Que.—Six dwellings destroyed. Hotel and nine other dwellings damaged.
New Orleans, La.—Swanson's restaurant and My-O-My Club, destroyed. Substation of New Orleans Public Service, Inc.; Grover's Restaurant; and Brunnings' Restaurant, damaged.
Columbia, Mo.—Phi Gamma Delta fraternity house of University of Missouri, damaged.
Norwalk, Ohio—Main terminal and home office of W. L. Mead, Inc., truck firm, North Fairfield, eight miles south, destroyed.
Shelbyville, Ind.—Oil bulk plt. of Farm Bureau, north edge of city, damaged.
Louisville, Ky.—Maintenance bldg. of Louisville Railway Co. destroyed. Lightning.
Wickliffe, Ky.—Pottery plt. of Mississippi Products, Inc., destroyed.
North Reading, Mass.—Ice house, Martin's Pond, owned by Ten Hills Ice Co., destroyed.
Harbor Springs, Mich.—Harbor Woodcraft Co. destroyed.
Saugerties, N. Y.—Main auditorium of Ernest Williams School of Music, Pine Grove, destroyed.
Portland, Ore.—Zidell Machinery & Supply Co. destroyed.
Coventry, Conn.—Dwelling of Hank Keene, destroyed.
Manchester, Conn.—Garage occupied by Union Motors, Inc., and apt. bldg., destroyed.
Springfield, Ill.—Bressmer's dept. store bldg. destroyed.
Tillamook, Ore.—Tillamook County Creamery damaged. Cigarette.
Dyersburg, Tenn.—Power plt. destroyed. Lightning.
Longview, Tex.—Texas theatre, Household Furniture Store, Dorice Blouse shop, Roundup Club and local finance company damaged.
Chehalis, Wash.—Natl. Bank of Washington bldg. damaged. Explosion.
Trenton, N. J.—Totten Feed Co., Yardville, destroyed.
Vancouver, B. C.—Bldg. and lumber of Evans Products and Northern Timber Co. destroyed.
Simcoe, Ont.—Planing mill of McCall & Co. destroyed.
Ste. Agathe, Que.—Storage bldg. of Ste. Agathe Lumber Co. destroyed.
Charlotte, N. C.—Charlotte Elks' Club, near heart of city, destroyed.
Canastoto, N. Y.—The T. H. Perrin Pharmacy Co. block damaged. A supermarket, the Avon Theatre, a women's wear store and another bldg. establishment adj. suffered from smoke and water damage.
Spartansburg, S. C.—Shell Oil Co.'s bulk plt. containing 40,000 gallons of fuel oil, tank car on siding, a huge whse., several loading pumps, and an undetermined stock of grease and other petroleum products, destroyed. Fire originated in patch of woods near bulk station.
Los Angeles, Cal.—Waval-Thermal Co. beauty shop supply plt. destroyed. Volatile oils.
Garvey, Cal.—Market destroyed.
Glenwood Springs, Colo.—An entire block in the downtown business section damaged by ex-



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plosion of three huge gas tanks of the Rose Motor Co. Additional tanks belonging to a service station and to the Standard and Continental Oil Companies were ignited. Damage included complete destruction of the Glenwood Produce Co., a wholesale food concern; complete destruction of a lumber yard; complete destruction of several homes and three railroad cars as well as the Rio Grande Railroad's freight depot.

Rockland, Me.—Fish processing plt. of Whitmoyer Laboratories, Crockett's Point Section, damaged. Acetylene torch hose burst.

Hailesboro, N. Y.—Mill operated by International Talc Co. destroyed.

Bellevue, Ohio—Bldg. occupied by J. C. Penney Co., damaged.

West Warwick, R. I.—Brouillard Bldg. damaged.

Vancouver, B. C.—Drug Store destroyed. Adj. New Method Barber & Beauty Shop and Park Realty, damaged.

San Francisco, Cal.—Automobile paint and repair shop destroyed.

Baldwin, Fla.—Baldwin high school damaged.

Dublin, Ga.—Peanut shelling and storage plt. of Southern Cotton Oil Co. destroyed.

Shell Rock, Ia.—Shell Rock consolidated school damaged. Defective wiring.

Monroe, Mich.—Whse. of Monroe Paper Products Co. destroyed. Lightning.

Las Vegas, Nev.—Cotton Club destroyed. Explosion.

Las Vegas, Nev.—Young Electric Sign Co. destroyed.

Cape May, N. J.—Recreation hall on Cape May Coast Guard Station destroyed.

Boaz, Ala.—Baty planing mill destroyed. Condenser plt. of Boaz Creamery damaged.

Kearny, N. J.—Lab bldg, at Koppers Co. destroyed. Explosion of distillate oil storage tanks.

Vernon, Cal.—A nine-acre lumber yd. containing four sheds, large amts. of lumber and three box cars loaded with planing was destroyed at the E. J. Stanton & Son Lumber Co.

North Kildonan, Man.—Hinge and washer factor damaged. Sparks from welding.

Portage la Prairie, Man.—Main cow shed at Manitoba School for boys, outskirts, damaged.

Beauceville, Que.—Door and window sash mfg. plt. destroyed. Two dwellings damaged.

Everett, Mass.—Nine bldgs. (Machine shop, pipe shop, iron shop, two storedoom bldgs., two office bldgs., laboratory and water and gas generating bldg.) and three storage tanks at Eastern Gas & Fuel Association plt. destroyed.

Revere, Mass.—Frankie Mack's nightclub, Beachmont section, damaged.

Plattsmouth, Neb.—Oakmont stables, outskirts of city, destroyed.

Crossville, Tenn.—Main factory bldg. of Cumberland Plateau Handle Co., hickory tool handle mfrs., destroyed.

Billings, Wash.—Heins motor supply plt. destroyed.

Janesville, Wis.—Whse. owned by Green Tobacco Co. destroyed. Another whse. damaged.

Prairie Farm, Wis.—Store of Farmers Store Co., Bloomer, destroyed.

Sheboygan, Wis.—Bldg. occupied by Milwaukee Journal News Agency and apts. damaged.

Oakland, Cal.—Window screen shop of California Wire Cloth Co. damaged.

Wallingford, Conn.—Jennings & Griffin Bldg. of Stanley Works, Tracy section, destroyed.

Ellicottville, N. Y.—Plt. of M. Murphy & Son Co. destroyed.

Alton, Ill.—Plt. of Reliance Whiting Co. damaged.

Charleroi, Pa.—Collins Dept. Store destroyed.

Logan, W. Va.—Cherry Tree plt. of Logan Baking Co. damaged.

Ottawa, Ont.—Lard mfg. plt., Eastview, damaged.

Milwaukee, Wis.—The Swift & Co., one-story brick whse. destroyed. Damage to foodstuffs included 1,200 canned hams, 5,000 pounds of sausage, 6,400 pounds of butter, 3,000 pounds of cheese, 25,000 pounds of lard, 25,000 pounds of shortenings and 50,000 pounds of soap.

Florence, Ala.—A. & P. Store damaged.

Long Beach, Cal.—California Seafood Corp.'s cannery destroyed.

Marshalltown, Ia.—Receiving barn at packing plt. of Marshall Packing Co. destroyed. Another bldg. damaged.

Burlington, N. C.—Long's Dept. store destroyed. Heating gas explosion.

Stanley, N. C.—Whse. of Stanley Mills, Inc., cotton thread mfrs., damaged.

Gallatin, Tenn.—"Don Cruzen" dwelling, six miles west, Sumner County, destroyed. Defective wiring.

Portland, Tenn.—Bldg. of Strawberry Crate Co., Inc., destroyed.

Ralston, N. J.—Dwelling, Route 24, owned by Paul Ritter, destroyed.

Easton, Pa.—Bldg. of H. Goldman & Sons, junk dealers, destroyed. Adj. whses. of Ralp Bros. Furniture Co., M. Kowitz Co. and J. H. Spencer Furniture Co., damaged.

Geraldton, Ont.—Sawmille destroyed. Spark.

Perkins, Cal.—Whse. and construction equip. in George Pollock Co. yds., destroyed.

Columbia City, Ind.—Main Bldg. of Daniel Bros. Packing Co. plt. destroyed. Overheated furnace.
Detroit, Mich.—Berlew Products. Co. damaged Smouldering rubbish.
Binghamton, N. Y.—"Meri" Lodge, near Norwich, 40 miles north, destroyed.
Pawtucket, R. I.—Bldg. of Pilgrim Rug. Co. destroyed.
Toronto, Ont.—Thompson Monument Co. bldg. destroyed. Two ad. bldgs. and several dwellings damaged.
Mobile, Ala.—The Gulf, Mobile & Ohio railway shops damaged.
Oakland, Cal.—Bldg., downtown section, occupied by retail shops, destroyed.
Chicago, Ill.—Indian Hill Country Clubhouse damaged.
Grand Rapids, Mich.—Grand Rapids Gravel Co. plt. damaged.
Duluth, Minn.—S. & S. Auto Parts Co. damaged.
East Rutherford, N. J.—Plt. of East Rutherford Syringes destroyed.
Clay, W. Va.—Elk Chevrolet Co. garage, office and showrooms, destroyed.
Roseburg, Ore.—Roseburg Lumber Co. destroyed.
Long Beach, Cal.—Ha Van Den Top Lumber Co. yd. and A. Swift lumber yds. adj., destroyed.
Norwalk, Cal.—Rivera Packing Co. plt. with packing house and 10 railroad cars destroyed.
Los Angeles, Cal.—Rue Angel Cafe, Reliable Hardware Co. store, Burke Cleaners, damaged.
Roseberg, Ore.—Two large kilns, the storage yd. and 1,300,000 board of kiln-dried lumber destroyed.
Toronto, Ont.—Lumber stocks of Sheppard & Gill Lumber Co. destroyed.
Fowler, Colo.—Onion storage whse. W. F. Robinson, two smaller sheds and two dwellings, destroyed.
St. Paul, Minn.—Waldorf Paper Products Co. damaged.
Akron, Ohio—Dwelling of William F. Robinson, Fairlawn Heights, West Hill, damaged.
Salt Lake City, Utah—Rainbow Randevu damaged. Cigarette in settee.
Richland Center, Wis.—A. H. Krouskon & Co. dept. store destroyed.
Orange, Conn.—Dwelling of H. J. Stuart, Jr., Corbin Hill, damaged.
East Chicago, Ind.—Plt. of B. I. Weller Co., damaged.
Norfolk, Neb.—Chicago Lumber Co.; Bill's Sporting Goods Shop; Schilling Coal Co.; Yellow Cab office; R. Corner Bar; Garden's Cafe and Ice-Bet Confectionery Co., destroyed.
Deadwood, S. D.—Schwarzwald Furniture Co. destroyed. Also, Eagle Inn Bar, J. & E. cigar store and cafe and Fairmont Hotel, damaged.
Tacoma, Wash.—Wilcox Flouring Mill destroyed.
Palmer, Alaska—Business district of Palmer, in the Matanuska Valley, damaged.
Coeur d'Alene, Ida.—Atlas Tie Co. destroyed.
Los Angeles, Cal.—Oil processing plt. of Spencer Kellogg Co., Terminal Island, damaged. Explosion of linseed oil distilling unit.
Chicago, Ill.—Factory bldg. occupied by U. S. Bronze Powder Co., Hodgeman Rubber Co. and others, damaged.
South St. Paul, Minn.—Six-block section of corrals at South St. Paul Union Stockyards Co., destroyed.
Allentown, Pa.—Dutch Maid Food Packing Co., damaged.
Amherst, Va.—Amherst Milling Co.'s plt. destroyed.

Fire Prevention Awards to Press and Radio

In recognition of their outstanding public service in promoting greater safety to life and resources from fire during 1947, gold medal awards were made by the National Board of Fire Underwriters, in May, to the Chelsea, Mass., Evening Record, a daily newspaper; the Syracuse-Wawasee Ind., Journal, a weekly newspaper; and to Radio Station WLS, of Chicago.

Honorable mention awards were made to eleven other newspapers and five radio stations throughout the nation. The awards were established in 1941 to provide recognition to the part which press and radio play in bettering their own communities through fire safety campaign. Selections were made by impartial juries; the award consists of a gold medal or $500 cash, at the recipient's option.

Modern Fire Fighting Calls for

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"SENSIBLE LUG" COUPLINGS

In modern fire fighting, there's nothing more important than good, dependable hose couplings. And in hose couplings, there's nothing better than the Powhatan "Sensible Lug" coupling. Fire departments the country over are turning to "Sensible Lug" because they are satisfied that it is, in point for point comparison, the soundest answer to the coupling problem.

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Massillon Stresses Fire Prevention

The Massillon, Ohio, Fire Department, Chief Ray H. Earle, is keeping up the pressure on fire prevention and protection promotion in every field of endeavor.

Previously a new idea on fire extinguishers location in industrial plants in Massillon was published in this journal. Now Chief Earle and his man have gone further. He has broadened the original idea to create it also into an "educational panel," as shown in the accompanying illustration. This panel is used in both Plants 1 and 2 of the Massillon Aluminum Company and located at the employees' entrance, or the time clock, where it cannot fail but receive the attention of workers. They stop and read it, and ask questions about the different types of extinguishers displayed. Chief Earle hopes that in time they will have memorized the information and become fully informed on "the right extinguisher for the right job."

Another of the Chief's fire prevention ideas consists of a card message, which is passed out to all hardware stores, gasoline stations, public garages, department stores, paint stores and so on, with the idea of discouraging the too-common practice of using flammable liquids as cleaning agents, and their storage in open containers. These cards are handed out by firemen who request that they be posted conspicuously on walls (and who take along the tape with them to do the job).

An ordinance is now in process which will require all hotels, apartments, rooming houses, rest homes, hospitals and flats over two-families or over two stories, to register with the fire department in January of each year, to get a permit to operate which will be issued only after inspection is made. The department claims to have found too many old houses converted into apartments of

Standing in Front of the Fire Extinguisher Board at the No. 2 Plant of the Massillon Aluminum Co. Are Robert Erickson, in Charge of Safety at the Plants of the Aluminum Co. and Two Women Workers

four families or more without anyone being notified, or anything being done to check on wiring, exits, heating, etc. "We know nothing about the conditions," says Chief Earle, "until we pull up in front of the place with the building going, and instead of a single couple living there, we find three or maybe more families."

According to the Chief, this winter was the first under the city's new heating code, regulating the installation of all heating plants and licensing all installers. The sharp drop in heating plant fires in Massillon this winter is due to this code. According to Chief Earle, in 1946, 40 per cent of all fires in buildings were caused by heating plants, whereas this winter, heating plants have been a minor cause of fires.

The "7-7 Club"

A progressive "Buffs" organization is the "7-7 Club" of Brooklyn, N. Y. It has twenty-three members, most of whom are fire buffs of long standing. The Club was formed in July, 1945, its members being drawn from membership rolls of the N. Y. F. D. Emergency Auxiliary Corps of the 10th Division. The name of the Club is appropriately taken from the department's preliminary notification signal for the Borough of Brooklyn, which is "7-7."

The Club Constitution and By-Laws set forth three objectives: (1) to take an active part in fire prevention, (2) to render aid and assistance to the members of the New York Fire Department, whenever and wherever called upon, without thought of compensation, and (3) to maintain an interest in things "firemanic."

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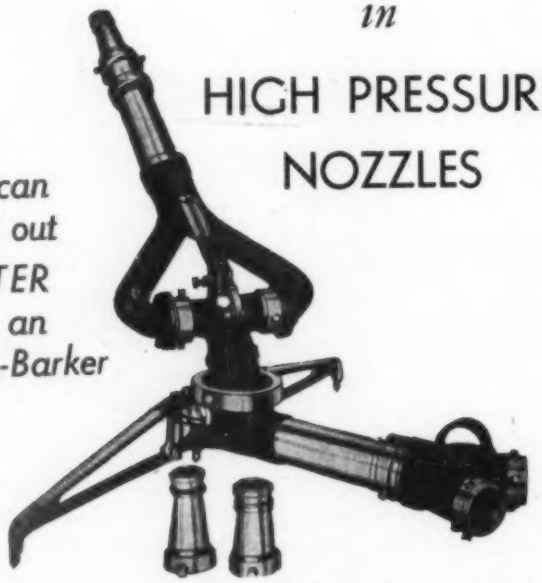

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The Club rooms are located next door to Engine Company 269 in Union Street, Brooklyn, and are very much like the inside of a firehouse, being equipped with housewatch desk and chair, primary alarm bell, installed by the Fire Alarm Telegraph Bureau (on Engine 269's circuit); a blackboard for record-

J. Halstead Brown

ing alarms received and a housewatch journal in which are entered pertinent data pertaining to alarms and other fire department information. A replica of the running board of Engine 269 listing its "first due stations" (boxes) is located on the wall.

The members of the Club respond to nearly all multiple alarms in any of the five Boroughs. One enterprising "7-7 clubber" hustled to Philadelphia recently to be in on a major fire in that city. Others responded to a general alarm blaze in distant Trenton, N. J.

The present officers are: J. Halstead Brown, president; Edgard W. Johnson, vice-president; George F. Holder, treasurer, and Edward W. McKenna, secretary.

Annual Reports Received

Wellington Fire Board Report

The 21st Annual Report and Statement of Account of the Wellington, New Zealand Fire Board, C. A. Woolley, Superintendent shows 1,247 calls for the year—a decrease of 172 from the previous year. There were 348 "justifiable false alarms" and 98 "malicious false alarms."

Two-way radio was introduced during the past year.

* * *

Los Angeles 61st Annual Report

The 61st Annual Report of the Department of Fire, City of Los Angeles, John H. Alderson, Chief Engineer, for the year ending June 30, 1947, contains much factual data, presented comprehensively.

In personnel, the department is almost up to full strength, 493 new men having been added; five men remain in military service. A bond issue of $4,600,000 was approved for new apparatus and fire stations. It will permit retirement of all apparatus 20 years old,

(*Continued on page* 417)

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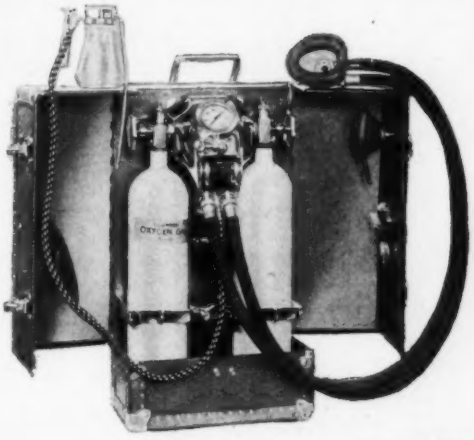

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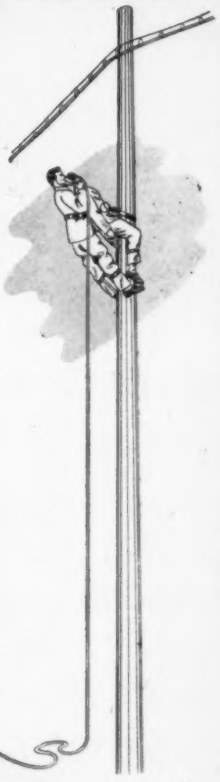

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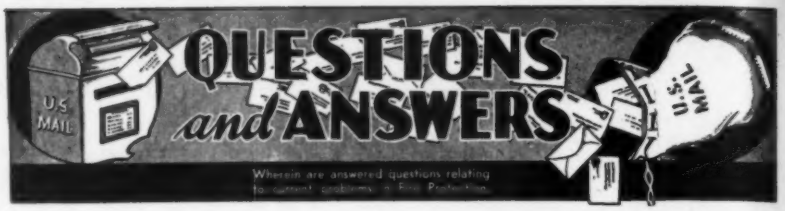

Static Head

To the Editor:

An engine is pumping through 1,050 feet of 2½-inch hose equipped with 1⅛-inch nozzle. Hydrant pressure is 115 pounds and there is a drop of approximately eight feet from the hydrant to the fire. What will be the nozzle pressure?

E. L. E.

Answer: First change the static head of 8 feet to pounds per square inch pressure.

This is done by multiplying the 8 by .434, giving us 3.5 pounds approximately.

Then the corrected hydrant pressure will be 115 + 3.5 or 118.5 pounds.

Nozzle pressure = engine pressure ÷ (1.1 + KL)

Engine pressure is 118.5 pounds; K, which is a factor depending upon hose and nozzle diameters is, for 1⅛-inch nozzle on 2½-inch hose, .167; L, which is the number of 50-foot lengths of hose in the line is 2*f*.

Then N. P. = 118.5 ÷ (1.1 + .167 x 21)
= 118.5 ÷ 4.6
= 25.76, or 26 pounds.

This pressure on a 1⅛-inch nozzle would give an effective vertical reach of 45 feet and an effective horizontal reach of 43 feet (based upon the National Board of Fire Underwriters table of fire stream ranges).

Friction Loss in Hoselines

To the Editor:

What will be the approximate friction loss in 550 feet of 2½-inch hose with water flowing at the rate of 280 gallons per minute?

L. J. B.

Answer: The formula for finding friction loss in 2½-inch hose is as follows:

F. L. per 100 ft. = 2 x Q x Q + Q, where Q is the flow measured in hundreds of gallons per minute.

As the flow in the problem you cite is 280 gallons per minute, Q would then be 2.8.

Thus the friction loss per 100 feet
= 2 x 2.8 x 2.8 + 2.8
= 18.48, or 18.5 pounds.

The friction loss in 550 feet of 2½-inch hose would be 5.5 x 18.5, or 101.75 pounds.

Drafting Water, Etc.

To the Editor:

What is the maximum number of feet a fire pump can draft water under the most ideal conditions?

What are the advantages and disadvantages of the three types of pumps used in the fire service, namely, piston, rotary gear and centrifugal?

Is it true that the popularity of the centrifugal pump now used lies in the fact that the slippage within the pump itself eliminates the use of a churn valve and this slippage also prevents hose ruptures, thereby making a centrifugal pump relatively simple to operate?

J. F. I.

Answer: While a fire pump is considered to be in good condition if it can draft water 25 feet, it is possible, under ideal conditions, to raise water as much as 30 feet.

Of course, the altitude of the place at which the tests are being conducted has a bearing in the matter. The higher we go up above the earth's surface, less atmospheric pressure we have, and therefore the lower the suction reach.

Theoretically, at sea level a pump with perfect vacuum could lift water between 33 and 34 feet, but such conditions as a perfect pump, creating a perfect vacuum, are never encountered.

The principal advantage of the centrifugal pump over the rotary and piston pumps is its flexibility. The last two named are commonly known as positive displacement pumps, that is, they discharge a given quantity of water each stroke or revolution. A centrifugal pump, on the other hand, can discharge from zero up to capacity without a material change in pump speed.

Furthermore, the flexibility of the centrifugal pump eliminates a number of mechanical troubles commonly encountered in the operation of the other two types. There is less danger of damage being done to the centrifugal pump where a line is shut off quickly than in the case of the piston and rotary pumps.

However, centrifugal pumps require a priming device in order to enable them to lift water by suction when the pump is being put in operation. Piston and rotary pumps, on the other hand, are able to lift water without a priming device.

Nozzle Pressure, Friction Loss, Etc., in Combined Layouts

To the Editor:

A 300-foot line of 2½-inch hose is branched into two lines of 1½-inch hose, each 200 feet long and equipped with ½-inch nozzles.

What is the nozzle pressure on each ½-inch nozzle?

What is the friction loss in this line of hose?

What will be the discharge?

S. P. T.

Answer: To find the length of a single line of 2½-inch hose equivalent to the layout you give, it is first necessary to reduce each of the two-hundred-foot lines of 1½-inch hose to 2½-inch, then

combine these two lines into a single line of 2½-inch hose and add it to the 300 feet of 2½-inch hose given in the problem.

The factor for changing 1½-inch hose to 2½-inch hose is 0.074.

200 ÷ 0.074 = 2702.7 feet.

Thus we have two 2½-inch lines each 2702.7 feet in length to be combined into a single line.

The factor for changing two parallel lines of 2½-inch hose into a single line of 2½-inch hose is 3.6.

2702.7 ÷ 3.6 = 751 feet, the length of a single line of 2½-inch hose equivalent to the two parallel lines of 1½-inch hose.

Then the total length of the line will be 300 + 751, or 1051 feet.

To solve for nozzle pressure, we must first assume an engine pressure.

We will assume the engine pressure as 120 pounds.

We have already found the length of a single line of 2½-inch hose equal to the layout given, but we must still combine the two ½-inch nozzles into a single nozzle.

This is done by squaring each of the half-inch nozzles, adding the squares and abstracting the square root, or .5 x .5 = .25. .25 + .25 = .5. The square root of .5 = .707.

The nearest standard size nozzle to one of .707 inches diameter is a ¾-inch tip, which has a diameter of .75 inches.

N. P. = E. P. ÷ (1 + KL), where K for 2½-inch hose and ¾-inch nozzle is .042.

L is 1051 ÷ 50 = 21.

Then N. P. = E. P. ÷ (1 + .042 x 21)
= 120 ÷ (1 + .042 x 21)
= 120 ÷ 1.882
= 63.7, or 64 pounds.

This will be the nozzle pressure at each of the ½-inch nozzles.

The friction loss in the layout is equal to the engine pressure minus the nozzle pressure, or 120 — 64, or 56 pounds.

The discharge from each nozzle is equal to $29.7 \times \frac{1}{2} \times \frac{1}{2} \times \sqrt{64} = 59.4$ gallons per minute.

The discharge from the two nozzles would therefore be 2 x 59.4, or 118.8 gallons per minute.

"Economy" Hits Youngstown

Following the defeat of a proposed 2.5-mill operating levy at the city's May 4 election, police and fire protection in Youngstown, Ohio, has been sharply curtailed, and other municipal services trimmed heavily.

According to a statement by Mayor Charles P. Henderson, quoted in the press, five of the city's 12 fire stations were to be closed, effective May 16.

Fire Victim Award $20,000

In the first verdict for families of the 132 victims of the 1944 explosion and fire at the East Ohio Gas Co. in Cleveland, a Cuyahoga County Common Pleas jury recently awarded $20,000 damages to Mrs. Anna Klostermeyer. Her husband died of injuries she contended resulted from the blaze. Witnesses testified the victim died Jan. 13, 1945, of lung injuries from the fire.

A total of 77 other suits amounting to $5,710,000 is pending in Cleveland courts against the Hope Natural Gas Co. and the Gas Machinery Co., the contractors who erected the storage tanks, one of which was reported to have been the source of the trouble.

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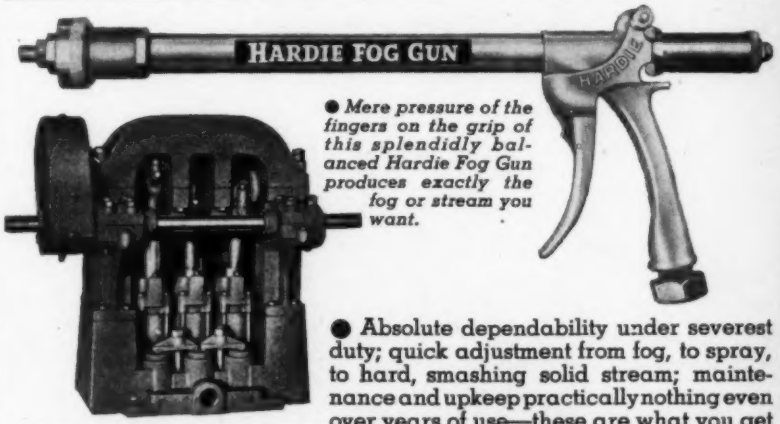

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Persons in the News

Chief Palmer to Retire

Fire Chief W. Hendrix Palmer announced on May 5, 1948, that he had asked to be retired after forty-four years of service with the Charlotte, N. C., Fire Department.

Still active after 64 years of age, the veteran chief requests retirement because of impairments to his health. The

Chief W. H. Palmer

exact date of his retirement is left with city officials. It is understood the Chief has discussed the details with City Manager Henry A. Yancey and that his request has been filed with Chairman Guy O. Bugwell and members of the Firemen's Retirement Trustee Board.

Under a non-occupational retirement, Chief Palmer would be eligible for three months' full pay, and continuous half-pay benefits thereafter.

Chief Palmer's name is known and held in high regard throughout the nation's fire fighting services. For eleven years he has been president of the North Carolina Fire Chiefs Association; he is past president of the International Association of Fire Chiefs and of the North Carolina State Firemen's Association.

Chief Palmer joined the Charlotte Fire Department as call man in 1904 at the age of 20 years. Two years later he went on full duty. Through the years he served in every position in the department except that of superintendent of the fire alarm division. He has twice served as chief—once for a day; once and lastly, for 21 years. The 24-hour elevation came in 1916 and ended abruptly when Palmer resigned after learning that the command at that time might be subject to a measure of political control.

During his colorful career in the department, Chief Palmer had many narrow escapes from death or serious injury. At one fire an explosion of dynamite in a burning building killed Chief J. H. Wallace and Captain W. B. Glenn of the department, who were standing only five or six feet from Palmer, leaving the latter unhurt.

During his tenure of office a number of reforms and improvements in the department were instituted, including the establishment of the two-platoon

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Plant shown is Model 15 DL-14 1500 watts, 115-volt D.C.

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system, standardization of uniforms and provisions for off-days for personnel of the department.

Chief Palmer served as chairman of a special fire advisory committee of the old Office of Civilian Defense, composed of firemen and engineers. His group had much to do with the development of the nation's World War II fire defense planning.

D. G. SPENCER

Chief Ogborn Retires

Chief Clarence Ogborn, a member of the Columbus Fire Department since 1910 and Chief since April 8, 1947, retired from the department on May 16, 1948, giving as his main reasons injuries

Retiring Chief Clarence Ogborn

received when he fell on the ice at the North market fire last yinter.

The veteran chief was born in Ohio, in 1881, came to Columbus in 1908, where he became a street car conductor. He joined the fire department two years later. Starting from that date, when the

Chief Walter D. Strickfadden

department apparatus was horse-drawn, Chief Ogborn worked as a fireman at all the city's outstanding fires. During his busy career, he served in every engine company except two and filled every job in the fire department, including the inhalator squad. When the late Chief Edward P. Welch went into the army in 1942, Ogborn was appointed

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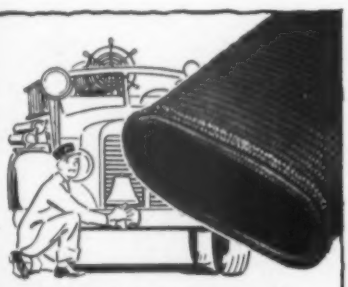

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Chief of the Fire Department. Upon Welch's return from the service in 1944, Ogborn automatically became assistant chief. He received his provisional appointment as chief, March 2, 1947, at Chief Welch's death. His full appointment came April 8, of that year.

In addition to the appointment of Chief Walter G. Strickfadden from the post of assistant to that of chief, a deputy chief, four assistants and six battalion chiefs were also officially appointed in May at a special ceremony in the office of Safety Director C. C. Cole.

The new post of deputy chief was filled by S. A. Zaayer; the assistant chiefs are Ralph Cassell, Albert Brophy, Jos. Cassell and C. F. Garrett. The battalion chiefs are Ray Phillips, John Jordan, George O. Brown, Walter Hoelcher, Albert Smith and Charles M. Pugh.

Chief Walter D. Strickfadden has been a member of the department for 37 years. He placed second on the Civil Service eligibility list last year and his appointment was practically automatic.

LARRY DONOVAN

W. H. Whitehouse Heads Connecticut Fire Marshals

Fire Marshal Wilson H. Whitehouse, of North Haven, Conn., was elected President of the Connecticut Fire Marshal's Association at its recent meeting in the North Haven Town Hall. George Harper, of Putnam, was elected Vice-President, Daniel Hazard, of West Haven, Secretary, and Richard Coley, of Milford, Treasurer.

The Executive Board, which includes one member from each of the eight counties in Connecticut, will consist of Fire Marshals Fox of Manchester; White of New London; Hamel of North Grosvenordale; Van Reuter of Winsted; Cramer of Fairfield; Nelson of Andover; and Davis of Columbia.

TOM MAGNER

Carroll Joins National Board

Robert F. Carroll has joined the public relations staff of the National Board of Fire Underwriters to do writing and publicity assignments.

Mr. Carroll during the war served as a combat pilot, and a special agent for the FBI. He previously worked for the *New York Times*, and since the war has been with Aero Insurance Underwriters.

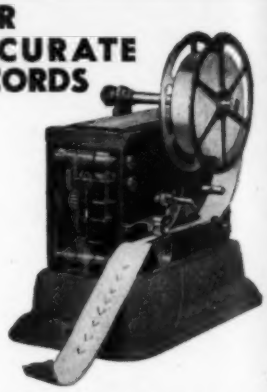
Chief Fred Schlorf Dead

Former Fire Chief Fred T. Schlorf, for eleven years head of the Toledo, Ohio, Fire Division, died May 16th. He retired April 5, 1946, after 44 years in the department, which during his tenure as chief he saw materially modernized from an undermanned force equipped with antiquated apparatus to an up-to-date 400-man organization.

Chief Schlorf was forced to retire as a result of back injuries received in 1941 in an automobile accident. In his long service he had the distinction of having a perfect record—he was never late for duty, never reprimanded or punished.

A former "fire piker" (as buffs, sparks and fans are known in Toledo), he joined the fire division in 1902. His rise in the ranks was steady. In 1909 he was promoted to lieutenant; he became

FOR ACCURATE RECORDS



HARRINGTON PR-10 FIRE ALARM

THIS punched tape register automatically makes records of the fire alarms or other emergency signals as transmitted over such circuits, in central fire alarm stations, outlying fire stations, police department offices, water works, etc.

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ASBESTOS FIRE SUITS

Complete with Safety Helmet

A definite necessity in every modern Fire Department. One piece—adjustable to almost any size. Specially treated for oil and gas fires!

Unused—U. S. Navy —Spec. No. N-37-S-10.

Your Department isn't complete without these suits.

Price $16.81 per suit

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a captain in 1914 and attained the rank of district chief in 1927. On June 20, 1935, soon after the retirement of Fire Chief Fred Myers, after heading the eligibility list for first assistant chief, he instead was appointed to head the fire division.

Chief Schlorf was succeeded by Chief Patrick J. Daly, who now heads the fire division.

Former Philadelphia Chief Dies

William H. Murphy, Chief Engineer of the Philadelphia Fire Bureau, from 1914 to 1920, died May 15, 1948, at the age of 76, after a long illness.

Chief Murhpy was appointed to the Fire Bureau in 1895, became assistant foreman five years later, foreman in 1907 and battalion chief of District 5 in 1911. He was made chief engineer in 1914 and retired on pension in 1920.

The late chief made the headlines in 1896 as the fireman who split the lip of fighter James J. Corbett when he attempted to enforce the theatre "no smoking" rules and found smoke coming from the champion's dressing room.

EDWARD H. SPRANGERS

Veteran Fireman Passes

One of the longest uninterrupted active fire fighting careers in the ranks of the nation's fire fighters was ended when death claimed Captain H. K. Schwartzbaugh at Virginia Gay Hospital, Vinton, Iowa, April 19, 1948. He had served sixty-two years and two months as a member of the Vinton Volunteer Fire Department.

Captain Schwartzbaugh joined as a fireman in 1886, while still in high school. He was a charter member of the department and in 1893 he and a group of Vinton firemen took the world's record in hand pumping at an Iowa Falls contest.

He served as fire chief in the 1890's and at the time of his death, at 78, was captain of the department and despite his advanced age, he was to be found in the thick of the fray on the fire-front.

BOB LA GRANGE

Chief H. A. Sullivan Dies

Howard A. Sullivan, 45, the first full-time Fire Chief of Thomasville, N. C., died suddenly of a heart attack the morning of May 5. He joined the Thomasville fire department as a volunteer in April of 1922, and was elected chief, March 1st, 1948. He was a member of the North Carolina Firemen's Association. Sullivan is survived by his widow and a son.

D. G. SPENCER

Obituaries

SOUTHOLD, L. I., N. Y.—Nat E. Booth, Chief of the Southold Fire Department for many years, died April 19, 1948. He retired several years ago after serving over twenty years as Chief.

So. HACKENSACK, N. J.—James Silvestri, 53, former chief of the South Hackensack Fire Department, was killed early on May 2, 1948, when he was struck by an automobile on Route 6 in Little Ferry, N. J. He had been chief of the department, which he joined in 1915, for eight years, when he retired in 1935.

ATMO ALERTS PREMISES AND NOTIFIES FIRE DEPARTMENT 5 SECONDS AFTER START OF FIRE!

ATMO is the famous low-cost automatic fire alarm system that operated so effectively at the International Association of Fire Chiefs Field Day at New Haven, Connecticut, on May 22, 1948.

Within a period of 5 seconds after the fire was started, ATMO alerted the premises by means of a blinker light and directional siren, at the same time transmitting the alarm directly to the New Haven Fire Department Headquarters by means of the municipal circuit. Within 56 seconds from the start of the fire, the first apparatus arrived and went into action on the fire.

The same results can be obtained in your town. Reduce the fire losses in your community by having ATMO installed in your most hazardous occupancies. Ask for a free survey by our engineering department.

The ATMO System is approved by

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ATMO — ACTS in SECONDS to STOP FIRE

J. H. SCHARFF, Inc.

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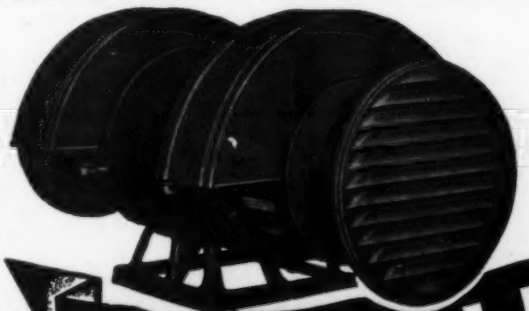

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An absolutely dependable, tried and proven siren for communities of all sizes. Loud, clear, simple to install and no maintenance to bother with. Embodying the "know how" of the oldest and largest makers of siren signals in the fire field. Write for descriptive literature and list of towns using the model "M." Also . . . Manufacturers of a Complete Line of Apparatus Sirens.

STERLING SIREN FIRE ALARM CO., Inc.

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DEPENDABLE - SIRENS

"All American Choice"

Made by pioneers *in nozzle manufacture*

INVINCIBLE
NOZZLES
F. N. McINTIRE BRASS WORKS
Successors to A. J. Morse & Son, Inc.
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We have been supplying FIREMEN'S CLOTHING for over 25 years.
Any fireman can have a catalog by writing—
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ST. JOSEPH MISSOURI

Manufacturers' Announcements

Federal Telephone and Radio Appoints Rennaker

R. B. Rennaker has been appointed sales manager of the mobile radio telephone division of Federal Telephone and Radio Corporation, Clifton, N. J.,

R. B. Rennaker

manufacturing associate of International Telephone and Telegraph Corporation.

Mr. Rennaker has been affiliated with the radio industry for the past 25 years, being associated with both the Mutual and Columbia Broadcasting systems. He also served with the war department in Washington. Beginning as a "ham" station radio operator, while still in school, Mr. Rennaker later became consulting engineer and part owner of an Indiana radio station. In 1934 he became chief engineer of radio station WFBM. He joined Federal in 1945 as broadcast equipment sales engineer.

Mack Truck Appointments

Appointment of Harry Bernard as chief engineer, replacing W. M. Walworth, who resigned, is announced by C. T. Ruhf, president of Mack Trucks, Inc. Mr. Bernard, who has been Director of Service and Service Engineering for the past three years, now assumes overall responsibility for the engineering of the company's entire line of trucks, buses and fire apparatus. For the present his headquarters will be in the Mack executive offices, Empire State Building, New York City.

A native of Canada and a graduate of Brown University, Mr. Bernard joined Mack in 1924 as a draftsman. He was promoted to the position of truck and bus engineer and continued in that capacity until 1938 when he concentrated on specialized engineering problems involved in bus manufacture. In 1942 Mr. Bernard was appointed assistant to the vice-president in charge of production. A year later he became General Service Manager, in which post he directed the supply of all Mack service parts in the U. S. and allied armies until the war's end.

Another appointment is that of John Walker as manager of Off-Highway and Mining Truck Sales, according to an announcement by A. C. Fetzer, vice-president of Mack Trucks, Inc. Mr. Walker, who joined Mack in 1918, will also be located in the company's executive offices in the Empire State Building. Mr. Walker was first in the engineering department, later being transferred to the Special Service Department which he headed from 1922 to 1942, when he was named assistant to the chief engineer. For the last three years he has been manager of the company's Sales Engineering Department.

General Detroit Appoints

New appointment to the General Detroit Corp. Sales Department are announced by E. A. Warren, vice-president in charge of sales.

Preston W. Wolf is now assistant to the vice-president. For the past two years he was sales promotion manager, and he will retain sales promotion and advertising responsibilities in his new position.

H. J. O'Neill has been appointed field sales manager. Also, currently announced is the appointment of Eric Park as eastern region sales representative with headquarters in New York, and Clifford Hain as midwest representative with headquarters in Chicago.

Mr. Wolf joined General Detroit after leaving military service, in March, 1945. He was formerly with the Manufacturers Life Insurance Co. and the Michigan Bell Telephone Co. Mr. O'Neill has been with the company since 1942, serving in various supervisory capacities.

U. S. Rubber Appoints

The appointment of Howard H. Weber as chief engineer and A. S. Basil as general sales manager of the wire and cable department of United States Rubber Company is announced by C. W. Higbee, manager of the department. Mr. Basil has been associated with the company since 1926, and Mr. Weber since 1934.

Other changes announced by Mr. Higbee are: H. J. MacDonald, assistant to the manager; H. F. Johnson, assistant general sales manager; R. A. Walker, merchandise manager; J. A.

The Name Pirsch Honored

Peter Pirsch & Sons Company, Kenosha, Wis., was the recipient of the Brand Names Foundation's "Certificate of Public Service" at the Wisconsin awards dinner at the Hotel Schroeder in Milwaukee, April 14, 1948. The citation was presented to Peter Pirsch, president of the company bearing his name, in recognition of the brand name, "Pirsch", identification with motor fire apparatus since 1857. The award dinner, sponsored by Brand Names Foundation, Inc., together with prominent Milwaukee business and industrial leaders, highlighted a week - long "Parade of Progress" brand educational program. Mr. Pirsch is shown receiving the award from Arthur Kniebler, Vice-President of Cooper's, Inc., Kenosha, former Director of the Foundation.

Leuver, assistant sales manager in charge of distribution; D. B. Karlskind, assistant sales manager in charge of commodities, sales engineering and new projects; G. E. Hubrig, sales manager, western division; C. A. Bartron, chief sales engineer; A. E. Aune, manager, automotive and aircraft wire sales, and R. C. Cassidy, manager, Uskon sales.

Mine Safety Advances Ryan

John T. Ryan, Jr. has been elected executive Vice-President of Mine Safety Appliance Company, makers of approved safety equipment, it is announced by George H. Dieke, President.

John T. Ryan, Jr.

Mr. Ryan joined the company in 1936 after graduating from Pennsylvania State College and Harvard Graduate School of Business Administration. Prior to his present position he has been successively Sales Engineer, Assistant General Manager and General Manager.

Theatre Fire Drills Pay Off

Persistent fire drills paid dividends on February 7, 1948, when nearly 500 children filed out of the Kent Theatre, Moncton, N. B., in a "practice fire drill" seconds before the building burst into flames.

The 482 patrons, most of them children, were intensely watching a matinee feature when theatre manager Lloyd Conrad, former naval petty officer, stopped the show. With fire raging in the basement, he ordered the building emptied. "Just like a practice fire drill," he told the youngsters, although even then smoke was seeping into the theatre. Without panic, the children lined up and filed out, as fire apparatus came speeding up.

The fire, first noticed at 1:45 P. M., burned for nearly six hours before firemen, on two-alarms, using all apparatus in the city, brought it under control. For a time it threatened to extend to neighboring wooden structures.

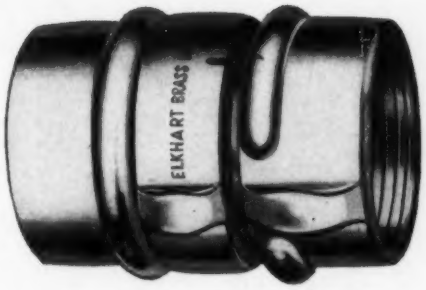
Conrad noticed smoke while taking tickets in the lobby. Upon investigation he found flames licking up the east wall of the three-story building which was heavily charged with smoke. He quickly alerted the theatre staff for the "fire drill" and halted the performance.

Firemen under Fire Chief Walter O'Blenis confined the blaze to the theatre building itself, which was damaged to the extent of $75,000.

Albany, Ore. — Construction of a new central fire station and improvement of fire alarm system have been recommended.

NEW! ELKHART'S ELK-A-LOY

Aluminum Slidewell Couplings



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- Light Weight — ⅓ Lighter than Brass
- Higbee Thread Indicator
- Available in 1½" and 2½" Sizes

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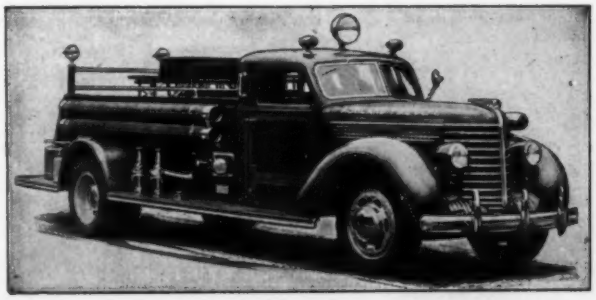
Champion Fire Apparatus



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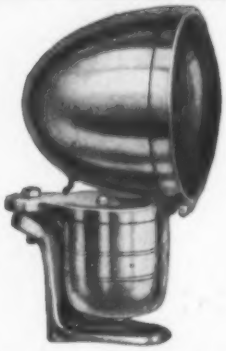
YOUR EQUIPMENT AND PERSONNEL



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NOW AVAILABLE

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JANESVILLE, WIS.

Convention Dates

June 21-26—SOUTH DAKOTA FIRE SCHOOL. Annual meeting Hot Springs, S. D. Secretary, Robert Hanigan, 423 West Prospect Avenue, Pierre, S. D.

June 22-24—NEW ENGLAND ASSOCIATION OF FIRE CHIEFS. Annual meeting, Wentworth-by-the-Sea, Portsmouth, N. H. Secretary-Treasurer, Chief John W. O'Hearn, 22 Mt. Auburn Street, Watertown, Mass.

June 23-25—MARYLAND STATE FIREMEN'S ASSOCIATION. Annual meeting, Ocean City, Md. Secretary, B. R. Benson III, 303 Bosley Avenue, Towson 4, Md.

July 5-July 30—ANNUAL SHORT COURSE OKLAHOMA FIRE COLLEGE. New course every Monday, Campus Fire Station, Oklahoma A. & M. College. Director, M. L. Powers, Department of Engineering Extension, Oklahoma A. & M. College, Stillwater, Oklahoma.

July 11-16—TEXAS STATE FIRE SCHOOL. Annual meeting, Texas A. & M. College, College Station, Tex. Director, Professor H. R. Brayton, Department of Chemistry, Texas A. & M. College, College Station, Tex.

July 18—CLINTON COUNTY FIREMEN'S ASSOCIATION. First annual meeting, Dannemora, N. Y. For details contact, Melvin W. Titus, Secretary, Dannemora Fire Department.

July 22-24—MICHIGAN STATE FIRE FIGHTERS ASSOCIATION. Annual meeting, Ironwood, Mich. Secretary, Walter S. Kellett, #1 Fire Station, Ironwood, Mich.

July 23-24—ASSOCIATION FOR FORMER U. S. NAVY, COAST GUARD and MARINE CORPS FIRE FIGHTERS. Annual meeting Kankakee, Ill. Secretary-Treasurer, William J. Mignery, R. No. 5, Elkhart, Ind.

July 26-27—MISSISSIPPI STATE FIREMEN'S ASSOCIATION. Annual meeting, Natchez, Miss. President, Chief R. G. Duren, Fire Headquarters, Greenwood, Miss.

July 26-28—WISCONSIN STATE FIRE CHIEFS' ASSOCIATION. Annual meeting. LaCrosse, Wis. Secretary, Chief Arthur J. Rahn, Fire Headquarters, Two Rivers, Wis.

July 26-29—WEST VIRGINIA STATE FIRE SCHOOL. Annual meeting, West Virginia University, Morgantown, W. Va. Director, R. E. Hanna, Jr., Fire Service Extension School, School of Mines, West Virginia University, Morgantown, W. Va.

July 27-30—DOMINION ASSOCIATION OF FIRE CHIEFS. Annual meeting, Lethbridge, Alta. Secretary-Treasurer, Chief Allan H. Clark, Fire Headquarters, Lakefield, Ont.

July 30-Aug. 1—OHIO STATE FIREMEN'S ASSOCIATION. Annual meeting, Neil House, Columbus, Ohio. Secretary, Chief M. W. Gifford, 5705 Market Street, Youngstown 5, Ohio.

Aug. 2-3—WISCONSIN PAID FIREMEN'S ASSOCIATION. Annual meeting, Madison, Wis. Secretary-Treasurer, John Kromel, 717-56th Street, Kenosha, Wis.

Aug. 2-6—SOUTHWESTERN ASSOCIATION OF FIRE CHIEFS. Annual meeting, New Orleans, La. Secretary-Treasurer, Chief G. R. McAlpine, Fire Headquarters, Oklahoma City, Oklahoma.

Aug. 2-6—PENNSYLVANIA FIRE SCHOOL. Annual meeting, Lewistown, Pa. Director, Edgar A. Spotz, Adviser, Fire Service Training, Public Service Institute, Harrisburg, Pa.

Aug. 16-20—FLORIDA STATE FIRE COLLEGE. First of two sessions, Ocala, Fla. Coordinator, J. P. Britton, Florida Fire College, Ocala, Fla.

Aug. 17—FIREMEN'S ASSOCIATION OF THE STATE OF NEW YORK. Annual meeting, Rome, N. Y. Secretary, Eugene M. Braun, 4025 Main Street, Buffalo 21, N. Y.

Aug. 19-21—OHIO FIRE CHIEFS' ASSOCIATION. Annual meeting, Toledo, Ohio. Secretary, Assistant Chief William H. Rosche, c/o Fire Department, Canton 2, Ohio.

Aug. 20-22—LANCASTER COUNTY FIREMEN'S ASSOCIATION. Annual training conference, Lancaster, Pa. For information, contact Assistant Chief Frank Deen, 33 N. Mary Street, Lancaster, Pa.

Aug. 21—BALTIMORE COUNTY VOLUNTEER FIREMEN'S ASSOCIATION. Annual meeting, Lansdowne, Md. Secretary, William A. Chenoweth, Milford Mill Road, Pikesville 8, Md.

Aug. 23-27—FLORIDA STATE FIRE COLLEGE. Second session, Ocala, Fla. Coordinator, J. P. Britton, Florida Fire College, Ocala, Fla.

Aug. 30-Sept. 3—TENNESSEE STATE FIRE SERVICE SCHOOL. Annual meeting, Murfreesboro, Tenn. For details, contact Fire Department, Murfreesboro, Tenn.

Sept. 3-4—INDIANA FIREMEN'S ASSOCIATION. Annual meeting, Anderson Hotel, Anderson, Ind. Secretary, Dee L. Corbin, P. O. Box 95, Bedford, Ind.

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New 24 page booklet shows illustrations and plans of smart, new, functionally designed fire stations—made possible only because Circul-Air is compact and has proven to be the most efficient drying method ever used. Your free copy is available.

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HERE'S SAFETY INSURANCE

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FAIRBANKS-MORSE
A name worth remembering

Convention Dates

Sept. 4—WESTERN PENNSYLVANIA FIREMEN'S TRAINING INSTITUTE. Annual meeting, California, Pa. Secretary, Chief Henry Neill, Box 83, Vestaburg, Pa.

Sept. 4-5—NEW HAMPSHIRE STATE FIRE TRAINING SCHOOL. Annual meeting, University of New Hampshire, Durham. Secretary, New Hampshire Fire Chiefs Club, James A. Brabaney.

Sept. 7-9—KENTUCKY FIREMEN'S ASSOCIATION. Annual meeting. Bowling Green, Ky. Secretary, V. A. Beam, 818 Sutcliffe Avenue, Louisville, Ky.

Sept. 7-11—MARYLAND STATE FIRE SCHOOL. Annual meeting, University of Maryland, College Park, Md. Director, Chief James W. Just, Fire Service Extension, College of Engineering, University of Maryland, College Park, Md.

Sept. 11—BATTALION CHIEFS COUNCIL OF NASSAU COUNTY. Annual tournament and parade, Hempstead, L. I., N. Y. For information, contact Edmund H. Wirth, Secretary, Hempstead Fire Department, Hempstead, L. I., N. Y.

Sept. 13-17—INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS. Annual meeting, Houston, Tex. Secretary-Treasurer, George J. Richardson, A. F. of L. Building, Washington, D. C.

Oct. 14-16—ILLINOIS FIREMEN'S ASSOCIATION. Annual meeting, Rockford, Ill. Secretary, Chief Roy W. Alsip, Fire Headquarters, Champaign, Ill.

Sept. 14-16—MICHIGAN STATE FIRE CHIEFS ASSOCIATION. Annual meeting. Sault Ste. Marie, Mich. Secretary, Chief Orie A. Hand, Lincoln Park, Mich.

Sept. 23-25—INDIANA FIRE CHIEFS ASSOCIATION. Annual meeting, Richmond, Ind. Secretary, Robert F. Hamm, Indiana Rating Bureau, 339 North Meridian Street, Indianapolis 9, Ind.

Oct. 4-7 — INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION. Annual meeting, Buffalo, N. Y. Secretary, Irvin Shulsinger, 11 West 42nd Street, New York 18, N. Y.

Oct. 31-Nov. 3 — PACIFIC COAST - INTERMOUNTAIN ASSOCIATION OF FIRE CHIEFS. Annual meeting, Sacramento, Cal. Secretary, Jay W. Stevens, Merchants Exchange Building, San Francisco, Cal.

Nov. 9-12—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. Annual meeting, Miami, Fla. Secretary-Treasurer, Chief Daniel B. Tierney, 8 Robbins Road, Arlington, Mass.

Short Cuts and Gadgets

(*Continued from page* 386)

reverse load I do not know, but in any event, it would steady the coupling."

Thanks Brother Moses, and for your information, this idea has been vicariously suggested at different fire schools. It is similar to the practical method of removing a nozzle by placing the foot on the hose just back of the coupling, and twisting the pipe.

The Watch Desk

(*Continued from page* 387)

another Chicago suburb. The latter place has a fire fighting force of 26, composed of Fire Chief Jack Ludolph and his 25 vamps. It also had a firehouse—until last November 14, when it burned up, or down.

After that sad episode, Marie got to figuring that Columbus Manor ought to have a new fire station. And so she needled the people of her own community and the Manor for funds, using her editorial acumen. Result—through her day-by-day efforts more than $1,200 was raised, and the re-building work begun.

Chief Ludolph and his fire fighters decided that somebody ought to honor Marie. So, at a dance, the Chief presented her in the name of the department with a gold badge, proclaiming her honorary fire chief.

In a world full of trouble it's kinda nice to hear of such good deeds!

75 YEARS OF SERVICE

A REAL MARK OF DISTINCTION

Back in 1873 this company started manufacturing pumps — we have never stopped. Today our Barton-American fire pumps are operating throughout the entire country — yes, even the world. These 75 years of continued service and experience are your guarantee of quality.

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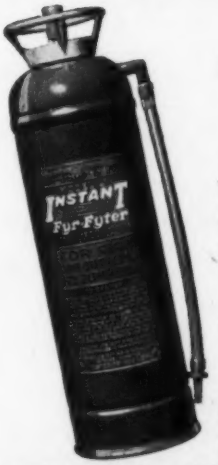
6 IMPORTANT FEATURES



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the INSTANT

1. Fast action on both class A & B fires.
2. Anti-freeze to —40° F.
3. Kills fire faster—retards reignition.
4. Easy to operate (invert, tap plunger).
5. No annual recharge needed—weight inspection only.
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Fyr-Fyter ENGINES | Fyr-Fyter PUMP TANK | Fyr-Fyter FOAM | Fyr-Fyter CO_2 | Fyr-Fyter SODA-ACID | Fyr-Fyter VAPORIZING LIQUID

Flammable Liquid Fires

(*Continued from page 372*)

though Harrison, Newark and other city fire departments stood fast, ready to aid Kearney, they were not needed. One Kearney engine and ladder company were left to cover the town and one company remained to protect South Kearney.

Water Fog Effective

Upon arrival, Chief Wandras and his forces found the two-story service building entirely involved and fire emitting from the two storage tanks. A portion of the condenser building was also burning. Radiated heat threatened the remaining storage tanks in the immediate area.

No amount of water would have enabled firemen to reach the trapped workers in the locker rooms and they were all dead before the arrival of the Kearney firemen, who immediately turned their attention to preventing extension of the fire.

Hand lines were stretched, some from hydrants in the plant grounds, others from pumpers at waterside, and streams directed on tanks and condenser building to cool them down. As additional companies rolled in, streams were played on the blazing service building.

In the desperate effort to control the fire in the storage tanks, Chief Wandras sent a crew to the top of one of the adjoining 40-foot high storage tanks, with a 2½-inch line fitted with a new type fog nozzle which delivers approximately 400 GPM of heavy water fog. This was the first time this type of nozzle had been used in actual fire operations by the Kearney firemen but it proved highly successful. According to Chief Wandras, the fires burning at the tank vents were snuffed out as if by magic. Water was continued until all danger of re-ignition was removed. The fire was under control by 2:00 A.M.

Four Investigations

Investigations into the fatal disaster were instituted immediately following the fire by the Kearney Fire and Police Departments, Hudson County Prosecutor's Office and the State Labor Commission. Plant officials also cooperated in getting at the cause.

It was determined that the explosion occurred when the southwest breeze carried part of the vaporized contents of the 30,000-gallon tank of distillate down wind where it became ignited by a hot pipe or other spark. The first reports that the blast was caused by naphthalene were incorrect, it was stated. The initial explosion involved the service and condenser buildings and caused a flash back, which, in turn, ignited vapors at the vents of tanks 42 and 43. These containers did not explode as also was first reported.

Company fire brigade members assisted Kearney firemen in attacking the blaze and in shutting down pipe distribution systems in that area of the plant.

The property damage was tentatively established at $150,000.

New England Convention

(*Continued from page* 394)

at the Maine Fires"; Chief Henry Fortier, Manville, R. I., "Fire Fighting in Rural Districts," and Walter H. Phoenix, Consulting Engineer, Concord, N. H., on "The Relation of Thermal Insulating Material to Fire Safety."

Wednesday's sessions include addresses by Chief Alfred Koltonski, Rutland, Vt., on "Firemen's Training in Small Communities"; Chief Paul P. Heinz, New Haven, Conn., "Surface Active Agents, Wet Water and its Advantages"; Chief Henry C. Thomas, Hartford, Conn., "Your Problems Are My Problems"; Ralph F. Anderson, Stoneham, Mass., "Radio and Its Advantages to Fire Departments," and Fred B. Philbrick, president, The Game-

Classified Advertisements

"For Sale," "Proposal" and "Wanted" advertising $6 per inch insertion less 10% for three or more consecutive insertions.

FOR SALE

American LaFrance 1000 gal. Metropolitan Pumper and Hose Car. Good Tires. Complete with Booster Brakes, 60 gal. water tank, large and small hard suctions. Rotary Gear Pump. Ready to answer alarms. Address: H. B. TAYLOR, ENG., SPRING LAKE FIRE CO. #1, Spring Lake, New Jersey.

POSITION WANTED

Sales Engineer for fire apparatus company or Fire Prevention Engineer for plant or municipality. Engineering background and twenty years as chief in small department. Write Box 80, c/o Fire Engineering, 24 West 40th Street, New York 18, N. Y.

FOR SALE

Seagrave F Motor City Service Ladder Truck in good condition. Booster Brakes and Standard Equipment. Now in Active service but being replaced by Seagrave Aerial Truck. Address all communications to PAUL E. SCHUMACHER, CITY CLERK, CITY OF ANSONIA, Ansonia, Conn.

WANTED

Fire Equipment Dealers to sell Morning Pride protected rubber firecoats, fire pants, fire mitts and fire suspenders.

Write today Morning Pride Mfg. Co., 1986 Home Ave., Dayton 7, Ohio.

FOR SALE

All types of Fire Extinguishers, used and unused Navy surplus. Nationally advertised makes. Underwriters' and Navy approved. Save 30% or more. Write for descriptive literature and catalog. R. M. B. CORPORATION, 1505 East 1st St., Los Angeles 33, Calif.

FOR SALE

White Cities Service Ladder Truck with Booster Pump.

CENTRAL MOTOR MART
398 Bridge Street
North Weymouth, Mass.

For Sale—To Canadian Municipalities

Electrically Controlled Fire Sirens, for 25 cycle power only. Made originally for Canadian Government—many unused—can be heard up to distance of five miles—twin tone—complete controls—5 HP motor—fifty available. Many Municipalities in Ontario have already made satisfactory installations. Phone, telegraph, or write for details. FRANKEL BROTHERS LIMITED, East Don Roadway, Toronto. GLadstone 4631.

RUBBER COATS AND BOOTS REPAIRED

Worn, torn rubber fire coats or boot uppers ordinarily ready for discard, can now be repaired as good as new by guaranteed "Factory Methods." The cost is small compared with the price of a new coat or boots.

GODFREY REPAIR SERVICE
40 Union Square East
New York 3, N. Y.

REPRESENTATIVES

Representatives wanted in states of Alabama, Connecticut, Georgia, Indiana, Michigan and Rhode Island by large Fire Hose Manufacturer. Attractive proposition to offer for distribution of its Fire Department Products. Experienced individuals or established Fire Equipment Distributors preferred. Reply by mail, giving full particulars. All letters held confidential. H. O. Meier, QUAKER RUBBER CORPORATION, Tacony & Comly Sts., Philadelphia 24, Pa.

FOR SALE

Ford Booster Fire Truck, 150 gal. pump, 300 gal. booster tank, suction hose two reels 400 ft. booster hose and equipment in good condition. Write for further information to

Box 75, c/o FIRE ENGINEERING
24 West 40th St., New York 18, N. Y.

FOR SALE—FIRE HOSE

You can't beat this value any place.

1½" DOUBLE JACKET, CRL. 50 ft. lengths. Top brand. Late 1944 dating. Unused Surplus in good condition. Slightly surface soiled. Only $10.00 per length including brass I.P.T. couplings. With N.S.T. or other couplings $12.50.

Also

Full Coverage Asbestos Fire Suits.....@ $3.50
Underwriter Nozzle, Br. 2½" N.S. Tip. @ $5.00
Siamese Y Valves, Brass, 2½" F., N.S. to pair 1½" M., N.S.T. or I.P.T.... @ $9.00
Adapter, Br. 2½" F.—1½" M., N.S.. @ $1.00
1½" Linen Hose, 50 ', Br. I.P.T.....@$10.00
Plain Siamese, Iron, 2½" F. to pr. 1½" M., N.S.T. with Cap..... @ $4.00
Plain Siamese, Iron, 2½" F. to pr. 2½" M., N.S.T. with Cap..... @ $6.00
Nozzle, 2½" N.S. with Swivel Handles @ $1.25
and Many Other Values. Write for Circular.

HALPRIN SUPPLY CO.
837 East 4th Place, Los Angeles 13, Calif.

WANTED

Dealer—Distributors to sell fire apparatus manufactured by well-known Mid-West Factory. Prompt delivery. Attractive proposition. Address Box 30, FIRE ENGINEERING, 24 West 40th St., New York, 18, N. Y.

FOR SALE

A 1921 Mack City Service Hook & Ladder and a 1921 Mack Pumper in excellent condition. Both trucks to be sold as is, F.O.B. Farmingdale, Long Island. For further information write the VILLAGE CLERK, Farmingdale, L. I., N. Y.

FOR SALE

45-day delivery guaranteed. 1949—500 GPM 1-2 and 2 Stage New Hi Pressure Pumpers on Ford, Chevrolet, Dodge, GMC chassis, 300 gallon tank, 3 suction and all other standard equipment, including pump and booster tank heater. New York State only. Write to Box 35, c/o FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

well Company, on "Vocalarm Communications for Fire Departments."

The afternoon session will start off with a round table discussion, headed by Fred Shepperd, Editor, FIRE ENGINEERING, covering the subjects of "Mutual Aid for Small Communities"; "Standardization of 1½-in. Threads and Booster Line Threads and Forestry Threads"; "Labor Conditions and Shorter Hours," and other subjects, to be announced. This will be followed by demonstrations by manufacturers of fire apparatus and equipment. The banquet will be held on Wednesday evening.

Thursday will see the reports of officers and committees, and other business of the association, concluding with the election of officers.

Officers of the Association for 1947-48 are: Chief Arthur W. Spring, Laconia, N. H., President; Chief William Hill, Belmont, Mass., First Vice-President; Chief Stuart Potter, Greenwich, Conn., Second Vice-President, and Ex-Chief John O'Hearn, Watertown, Mass., Sec.-Treas.

Reports Received

(*Continued from page* 405)

or over. Fire alarms decreased from 23,288 to 22,621 and fires, from 17,608 to 16,442. The loss in the S. S. Markey fire ($5,037,500) increased the year's fire losses over the previous period.

Chief Alderson urges that "a plot of ground should be secured by the city, in the proper zone, sufficiently large for development of a training ground for fire fighting. On this training ground facilities should be provided for instruction of personnel in actual fire fighting under actual fire conditions."

Chief Alderson also advocates the purchase of two-way radio "until the mobile apparatus of the department is completely equipped." The report of W. A. Randall, Battalion Chief in charge of communications, estimates that approximately 10,000 messages per month are transmitted by department radio.

* * *

Detroit Fire Prevention Bureau Reports

Detroit is one of the few cities which publishes a specialized report on fire prevention activities. Edward W. Hall, Fire Marshal, reports for the Bureau for the year ending Dec. 31, 1947.

During the year, 128,008 inspections and reinspections were made—52,575 by company officers. The Bureau engaged in widespread public relations work.

* * *

Report of Good Will Fire Company

The annual Report of the Good Will Fire Company, Hyde Park, Reading, Pa., Stanley T. Moyer, Chief, is an excellent example of workmanlike statistical fire reporting. The Company answered 43 calls during 1947, of which 31 were in Muhlenberg Township, 6 in the Borough of Laureldale, one in the Borough of Temple, two in Alsace Township, two in Bern Township and one in the City of Reading. Apparatus traveled 174 miles, and the 496 men who responded worked 567 hours. The total loss on property and contents for the period was $221,870 most of which was due to the Bowers Battery Company fire in Muhlenberg Township.

The Report concludes with a strong sermon on fire prevention and pleas for additional fire fighting facilities.

FIRE RESCUE WORK?
Here's the answer! DAVY Automatic FIRE ESCAPE

An absolute necessity in every fire department, eliminates carrying people down ladders. Five times as fast as old ladder methods—with absolutely no danger to either firemen or rescued person. Lowers adults or children at about equal rate (2 feet per second). When one victim is on the ground another strap is at the window ready for second victim or fireman who makes the rescue. Get one now, convince yourself, chief, and you'll put them on every ladder truck. Hotel model fastens inside window frame. This model should be recommended by fire inspectors for every hotel, rooming house and institution in town. It's a lifesaver!

Avoid strain and weight on extended ladders—no deaths or injuries from deadweight handling on icy or wet rungs.

• DEALERS •

Fire Depts. everywhere are in immediate need of the "DAVY" Automatic FIRE ESCAPE. Sell one model to all fire depts., sell another model to hotels, etc. Write for dealer proposition.

DAVY AUTOMATIC FIRE ESCAPE CO.
COLVIN STATION BOX 51
SYRACUSE, N. Y.

"CENTRAL" HAS A RECORD FOR DEPENDABILITY

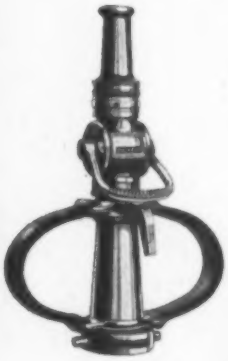
Central 500 Gallon Fire Equipment Mounted on Commercial Chassis

FROM THE SMALLEST TRUCK TO THE LARGEST CUSTOM BUILT PUMPER—CENTRAL DESIGN AND CONSTRUCTION LEADS THE FIRE APPARATUS FIELD

CENTRAL FIRE TRUCK CORPORATION
4437 MANCHESTER ST. LOUIS 10, MO.
Write for our new 62-page catalog

How to make it hot for fires

No. 935
Chief's Car
Whistle



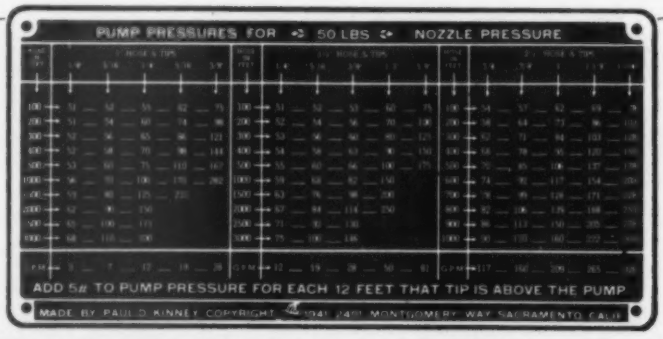
No. 900
Shut-off Nozzle

No. 925
Siamese Gates

Every item added to your Buckeye complement steps up efficiency because each is a precisely engineered and carefully constructed piece of mechanism designed to do a specific job *best*. Shown here are a few—get details about the Buckeye line in the catalog which is yours for the asking.

Buckeye
FIRE DEPARTMENT ACCESSORIES

BUCKEYE IRON AND BRASS WORKS • DEPARTMENT E
P. O. BOX 883, DAYTON 1, OHIO


PUMP PRESSURES FOR 50 LBS NOZZLE PRESSURE
ADD 5# TO PUMP PRESSURE FOR EACH 12 FEET THAT TIP IS ABOVE THE PUMP
MADE BY PAUL D. KINNEY COPYRIGHT

KINNEY'S PUMP PRESSURE CHART provides valuable aid to pump operators in suburban areas. Used exclusively by California State Division of Forestry. Made of metal, 4" x 8", can be attached directly to pumper. $5 each. Discounts on large orders.

PAUL D. KINNEY & SON • **3360 H Street, Sacramento, Calif.**

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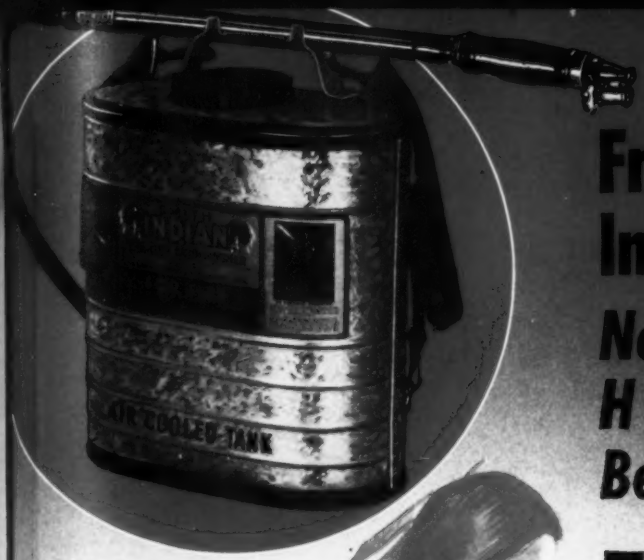

From Childhood Every Indian Learned to Hunt -

No Matter How Hard You Hunt You Can't Find Better Fire Fighters Than

INDIAN FIRE PUMPS

INDIAN FIRE PUMPS are furnished with either solid brass or galvanized tanks.

Why be uncertain about what fire fighting equipment to buy when tests have *proven* that INDIAN FIRE PUMPS are the fastest, most economical, all purpose extinguishers. For grass, forest, field, room and building fires and roof, rubbish, partition and Class A fires they have no equal.

Clear water or properly formulated wetting agents may be used. Nozzle adjusts for high pressure straight stream, spray or fog mist. 5-gal. tank and solid brass pump carries by handle or slung on the back.

Let us send you our catalog. It explains everything you want to know about INDIAN FIRE PUMPS.

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Roy S. Davis Co. 617 East 3rd Street
Mill & Mine Supply Co. 2700 Fourth Ave. Seattle, Wash.
Fred E. Barnett Co.
Fred E. Barnett Co. 2005 S. E. 8th Ave. Portland, Oregon

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EVERY INCH A FIRE-FIGHTER

A Sound Investment in Fire Protection

FWD

FOUR WHEEL DRIVE
FIRE TRUCKS

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